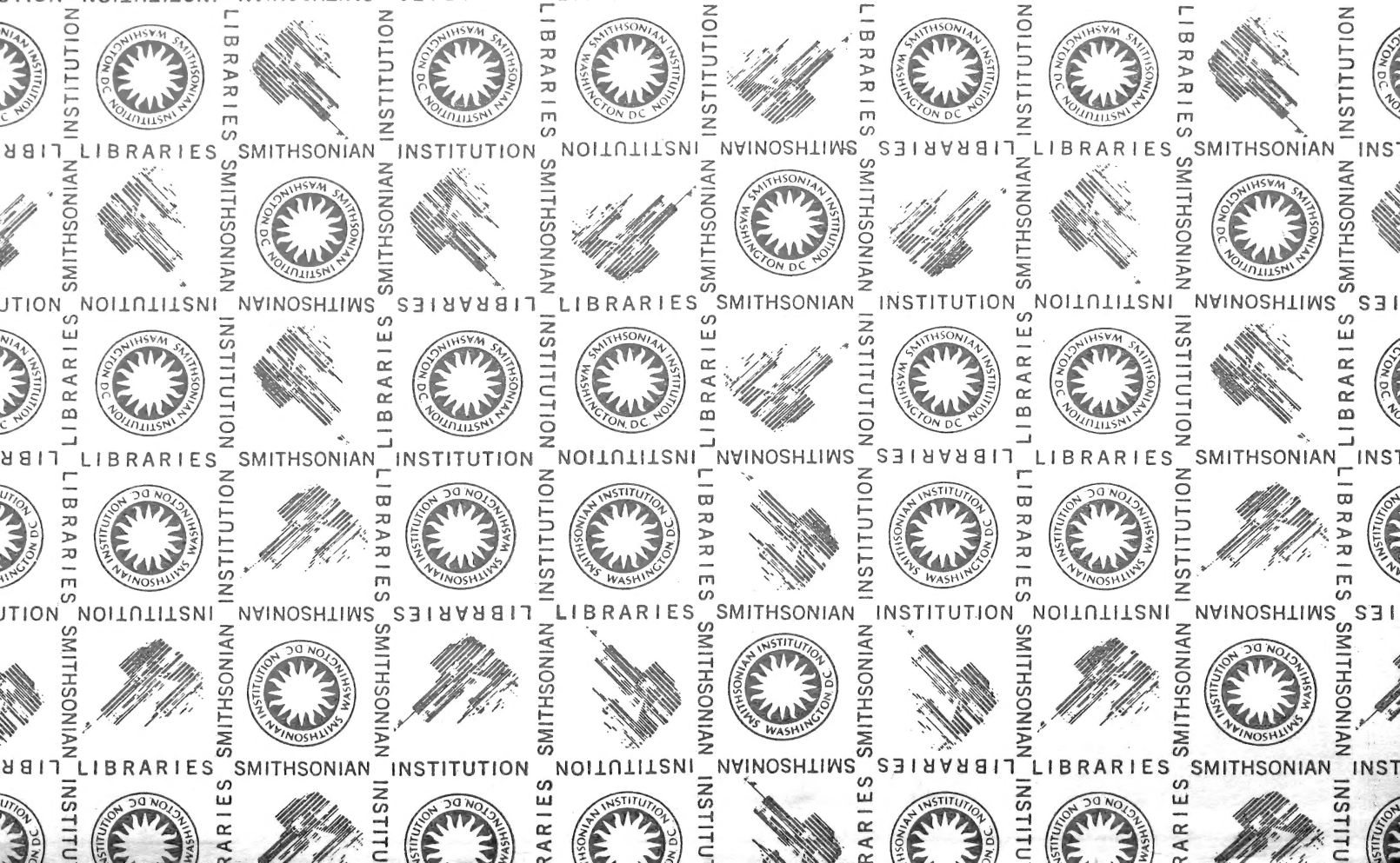
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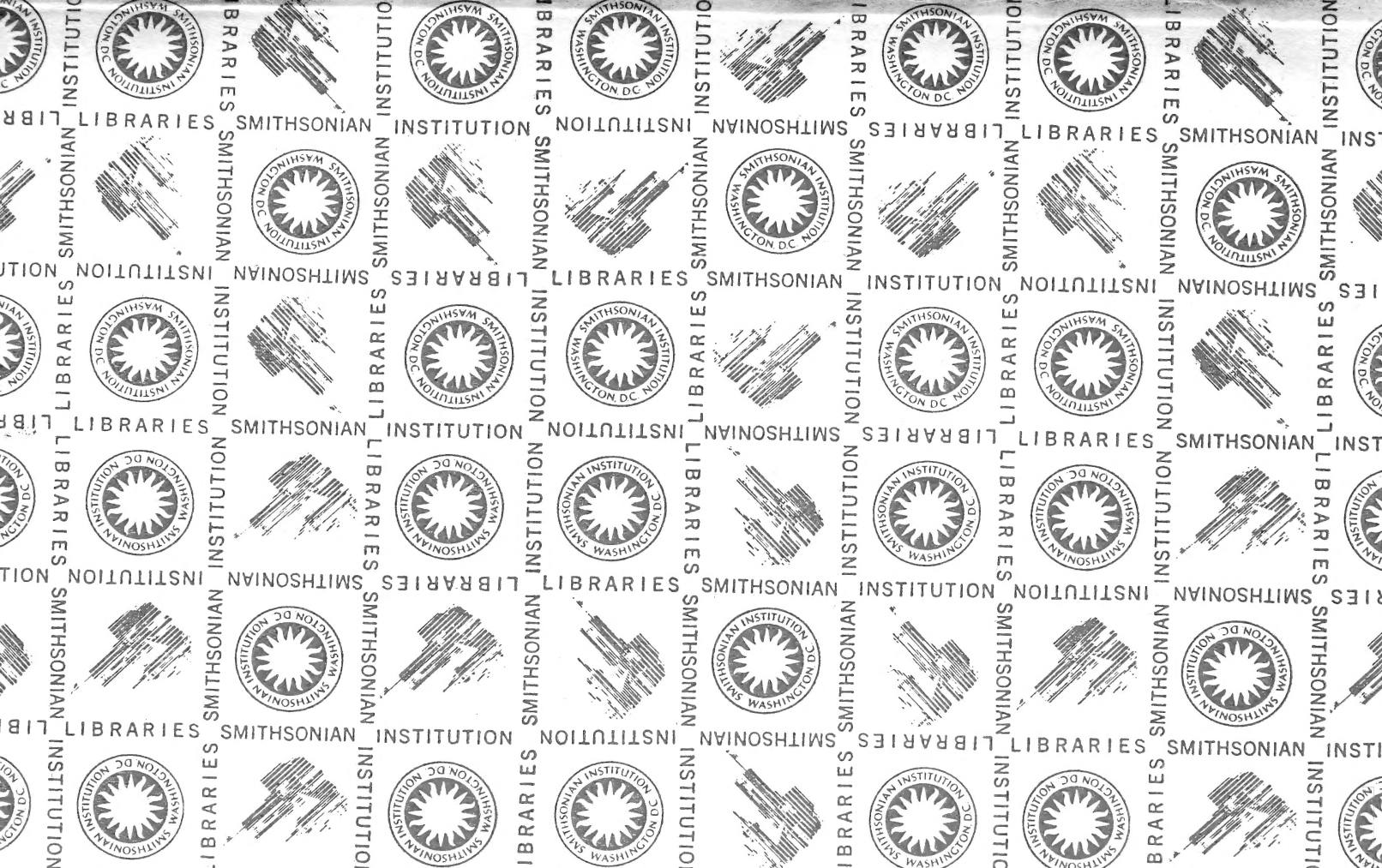
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Scottish Birds

THE JOURNAL OF
THE SCOTTISH ORNITHOLOGISTS' CLUB

Edited by
ANDREW T. MACMILLAN

with the assistance of
D. G. ANDREW P. J. B. SLATER T. C. SMOUT

Business Editor T. C. SMOUT

VOLUME 4

1966 - 1967

Walter Thomson, Printer, Selkirk.

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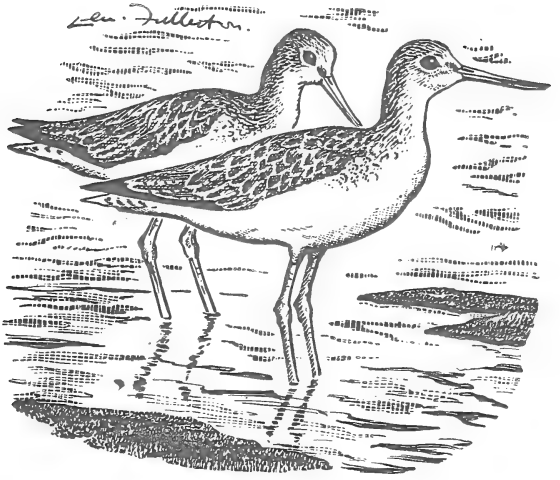

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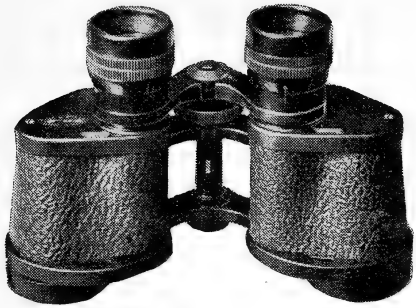

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THE JOURNAL OF THE SCOTTISH ORNITHOLOGISTS' CLUB

Volume 4 No. 1 **Spring 1966**

Edited by A. T. MACMILLAN with the assistance of D. G. ANDREW, T. C. SMOUT and P. J. B. SLATER. Business Editor, T. C. SMOUT.
Cover Design (Greenshanks) by LEN FULLERTON.

Editorial

Protection of Birds Bill. The new Protection of Birds Bill was given an unopposed second reading in the House of Commons on 28th January 1966. It was introduced by Col. Sir Tufton Beamish. Earlier it had received a third reading in the House of Lords, where it was introduced by the President of the R.S.P.B., Lord Hurcomb.

The purpose of the Bill is to strengthen the 1954 Act. It takes away the power of the Secretary of State to deprive the eggs of certain common birds of the normal protection given to all species. This removes one of the obstacles that has prevented Great Britain signing the International Convention for Bird Protection—an ironic situation for a people internationally famous as animal lovers. It will also mean that the law is less easily thwarted by a glib talker passing off rare eggs as those of a common species to an unornithological policeman. The Bill also makes it harder for a known egg collector to escape under the frustrated noses of the police for lack of a search warrant. He, and his car, may be stopped and searched on reasonable suspicion that he has been after the eggs of rare birds.

The Bill prohibits the import or sale of Lapwings' eggs and the sale of wild geese throughout the year. Power is taken for the Secretary of State, after suitable consultation, to impose a temporary ban on shooting in severe weather. It is also made an offence wilfully to disturb rare birds at their nests. A point of special interest in Scotland is that the Secretary of State will have power to allow the traditional harvesting of gugas (young Gannets) on Sula Sgeir to start two weeks earlier—from 14th August instead of the 31st.

It is to be hoped that these provisions will be ratified by Parliament. They are generally desirable. Our one regret is that if we want a tasty young Grey Lag for dinner it seems we must either take up wildfowling or rely on the goodwill and generosity of our shooting friends. This looks like a

subtle way of encouraging good relations between birdwatchers and wildfowlers—at least to birdwatchers.

The R.S.P.B. and 'Birds'. The Royal Society for the Protection of Birds has come a long way since the days of the plume trade. 'Protection' is a word tinged with emotional overtones, and the society has done well in recent years to opt for a policy of positive conservation and education rather than a sterile 'hands off' approach.

To prosecute egg collectors and bird catchers helps to discourage their activities and is therefore worthwhile, but it is favourable and informed public opinion that will do more good for wild birds. Bear baiting and cock fighting are no longer a problem, not because they are illegal but because most people would not tolerate them.

Much of the R.S.P.B.'s recent success has come through favourable publicity from showing its work to the public—such as the 20,000 ordinary holidaymakers visiting the Loch Garten Ospreys each summer.

With the rapid increase in membership and income, to a higher level than any other British wild bird society, the R.S.P.B. has been able to improve its publicity and start many new projects. Undoubtedly its most important work is education, in the widest sense: all else will follow. With first-class films, wall charts, nest boxes, bird feeders, Christmas cards, birdsong records, press releases, broadcasts, television appearances, competitions for schoolchildren, courses in birdwatching, journals, books, slides, filmstrips, birdy gifts, bird reserves, observation hides and conducted tours, the society is already doing a lot. We note each new venture as further evidence of progressive ideas.

These reflections are prompted by the arrival of the first issue of *Birds*, subtitled *The R.S.P.B. Magazine,* in place of *Bird Notes,* the successor to *Bird Notes and News*, first published in 1903. The spacious $8\frac{1}{4}$" x 11" format, on the lines of *Animals* and the American *Audubon Magazine,* breaks away from the slightly cramping octavo size of British bird magazines. Charles Tunnicliffe's delightful pictures, which have adorned the covers for the past twelve years (the covers certainly do not get thrown out when binding volumes of this journal), give way to colour photographs alternated with the work of a variety of bird artists. The front of the first issue is glorious colour to the very edge—the considerable cost made possible by the large number of copies printed.

One may fault some details but the total effect is a big step forward. The modern appearance of *Birds* conveys a firm message that the R.S.P.B. is an up-to-date society.

Young Ornithologists' Club. This revitalised junior section of the R.S.P.B., with its own magazine *Bird Life*, is open to boys and girls up to the age of 18. It has just adopted a Kestrel in flight as its badge. A dozen exciting holiday courses in various aspects of bird study have been arranged for 1966. The club is very active. It recently ran a competition at the Schoolboys and Girls Exhibition at Olympia with a fortnight's holiday in Spain for two as first prize and a bicycle and binoculars for the runners-up. Full details of the Y.O.C. may be had from The Lodge, Sandy, Bedfordshire.

The Birds of Foula. With this first number of vol. 4 we are distributing copies of our first supplement for nearly four years. This detailed account of *The Birds of Foula,* based on the work of many people over a long period, well deserves its place beside the earlier *Scottish Birds* supplements on Duddingston Loch (1: 393-416, 474) and Tentsmuir (2: 113-164, 497)—still obtainable, as is the earlier publication on Aberlady Bay, at 5/- each from the Scottish Centre for Ornithology.

There is a fascination in remote islands, but Foula is additionally a place of the greatest ornithological interest. Observations have been made there regularly since 1954 and are still going on; the problem has been to decide when to pause and put everything on paper. It is a happy chance that this account follows so soon after Ken Williamson's book on *Fair Isle and its Birds.* Fair Isle of course has its own *Bulletin,* and a lot of scientific papers have been published, so that the account of its birds is in part a convenient summary of what has already appeared in print; but most of the recent records from Foula have not been published until now.

Index and binding vol. 3. Title pages and an index for vol. 3 are being sent to subscribers with this issue. Arrangements for binding are given inside the cover of the index. Readers who want their copies bound are asked to send them to the binders now—after carefully filling in the particulars asked for on the back cover, and checking that they have sent the right money.

Current literature. Recent papers of special interest to Scottish ornithologists include:

Moult and its relation to taxonomy in Rock and Water Pipits, K. Williamson, 1965. *Brit. Birds* 58: 493-504. Valuable review of three Scottish races and immigrants.

The British breeding distribution of the Pied Flycatcher, 1953-62. B. Campbell, 1965. *Bird Study* 12: 305-318. Includes Scottish records by county.

Scottish Ornithologists

2. Martin Martin c. 1656-1719

IAN D. PENNIE

(Plates 10-11)

Martin Martin should require no introduction to Scottish readers, yet so little is known of the life of the author of what has been justly described as "the first intelligent topographical book regarding Scotland" that any attempt at a biography necessarily consists of a few facts weakly supported by a great deal of conjecture.

Martin Martin was the third son of Donald Martin of Bealach, Duntuilm in the Isle of Skye, where he was born on some date between 1656 and 1660. The family was apparently one of some standing for his father acted as chamberlain of Trotternish and married a niece of Sir Donald Macdonald of Sleat. He was educated in Edinburgh along with his brothers Donald and John, and there received the degree of M.A. in 1681. He was subsequently employed for some period until 1686 as governor (tutor) to Donald Macdonald, younger, of Sleat, evidently his own second cousin who was about ten years his junior; and from 1686 to 1692, or possibly later, as governor to the younger Macleod of Dunvegan.

In the Dunvegan household accounts occur the following entries:

> Martin Martin, Governor to the young laird for 100 marks part payment of services dated Oct. 13, 1686.
>
> Martin Martin for 100 marks part payment as above, dated Aug. 18 1686.
>
> Martin Martin 100 merks part of stipend from Whitsunday 1688 to Whitsunday 1689.
>
> Martin Martin Governor to the young Laird for £100 for service in 87 July 29, 1688 and for £6 stirling a quarter's pay at same date.
>
> From Martin Martin two receipts, 1 June 1690 for £6 sterling, 2 July 6 for £10 sterling, 25 Aug. from A. MacLeod payment of above.
>
> Martin Martin for 116 marks for the use of Issabel McLeod Aug. 13, 1692.
>
> Donald McLeod indweller in the Isles for 759 marks upon a judgement from the Countess of Linlithgow also 100 marks given to Martin, McLeoid's man, for his charges north, dated March 9, 1694.

This last entry, which seems to have been overlooked by previous biographers, rather suggests that he was employed at that time by Macleod on some estate business, possibly in Harris, where he certainly must have been about that time, this being the place of embarkation for St Kilda, which, he says, "I attempted several times to visit, but in

vain, until last summer [1697]." The ultimate successful voyage was an estate expedition, and possibly Martin was then still under contract with Dunvegan. Unfortunately, apart from the vivid description of this stormy passage, we have no record of any of his actual journeys or fellow travellers.

It is significant that the year of Martin's graduation, 1681, was also the year of the foundation of the Royal College of Physicians in Edinburgh by Sibbald, Balfour and Pitcairn; and it may indeed have been these who "raised his natural curiosity to survey the isles of Scotland more exactly than any other." The assertion by F. T. Macleod (1920) that his journeys were undertaken "mainly at the request of Sir Robert Sibbald" may well be correct as the latter was at that time actively engaged in collecting the material for *Scotia Illustrata.*

We know from Martin's own statement that he knew Dr Pitcairn—"Dr *Pitcairn* told me that the like Cure had been perform'd in the Shire of *Fife* for the same Disease." We know also that he was at least familiar with the work of James Sutherland, who was gardener in charge of Sibbald's botanical garden and later professor of botany, so it can safely be assumed that he had associated with Dr Sibbald in Edinburgh. It has even been suggested that Martin began to collect the material for his publications before he left Edinburgh, the evidence being the passage referring to Benbecula that "this island belongs properly to Ranal Mackdonald of Benbecula", a chieftain who died in 1679. One certain fact is that later Sibbald possessed a copy at least of Martin's *A Late Voyage to St Kilda,* as in Sibbald's *History of Fife and Kinross* there is a description of a Storm Petrel which was shot at Leith, which he calls the Assilag, saying, "I found it agreed well with Mr Martin's figure, and description of the bird."

Martin's Edinburgh associations may eventually have influenced his decision to study medicine, although he did not take his medical degree until much later, entering Leyden Medical College in March 1710, where Sibbald had studied fifty years earlier. It is said that he never practised his profession and that he latterly resided in London, where he died, unmarried, in 1719.

Martin Martin wrote two books and two scientific papers. The earlier book was entitled *A Late Voyage to St Kilda* and was first published in 1698; the second, *A Description of the Western Isles of Scotland,* was published in 1703. A full description of these, with details of collations and editions, is given by Mullens and Kirke Swann, but the latest, and most useful source for reference, was the combined edition of

1934 published by Eneas Mackay in Stirling. It is a pity indeed that this fine volume has not been reprinted.

As a mine of contemporary information pertaining to the Scottish isles, for the folk-lorist, the naturalist and particularly the medical historian, these two books stand unique and indispensable. Martin did not write travelogues, but simply and impersonally recorded what he saw and heard, usually distinguishing clearly between heresay and personal observation. He had certain obvious outstanding qualifications for his mission; he travelled the isles not as a stranger in a foreign land, yet as an educated and trained observer; he had considerable knowledge of medicine, and seems to have been well briefed by the leading Scottish scientists of the day; and lastly he was a speaker, though possibly not a fluent writer, of Scottish Gaelic.

The scientific papers are of relatively minor importance. Both were published in the *Philosophical Transactions of the Royal Society,* although Martin himself was never a fellow of the Society. The first of these papers was published in 1697, presumably soon after his return from St Kilda, and consists of twelve numbered, brief and disconnected paragraphs, all medical in content except the first three, which are quoted in full below:

> 1. All Tribes of Fowls are observed to have their Sentinels, especially in the Night, the Watchfulness of the Scart is true to a Proverb; I have known one, who by surprizing the Sentinel, catched Three Hundred in a Night.
>
> 2. The want of Rain at the usual time of laying Eggs, hinders the Sea Fowls from laying for some time.
>
> 3. If the *April* Moon goes far in *May,* it hinders the Sea Fowls from laying Ten or Twelve Days longer than is ordinary.

The second paper in purely medical and was published in 1707.

Seventy years after the publication of Martin's second volume, Samuel Johnson set out on his equally well known journey to the Western Isles and wrote his account of it, the opening sentence of which reads, "I had desired to visit the Hebrides, or Western Islands of Scotland, so long, that I scarcely remember how the wish was originally excited . . ."; but it is clearly stated in one biography of Johnson that "Dr Johnson's father, the old Lichfield bookseller, had put into Johnson's hands, when Johnson was very young, a copy of Martin's work, which aroused his youthful fancy." So it may well be that Johnson's journey was undertaken solely as a result of his early study of Martin's *Western Isles,* and it is known that Johnson had a copy of it with him on his voyage, for this actual copy is still in existence.

Interspersed in the general matter of both of Martin's

books is much ornithological material: some of this has been quoted by Mullens and other writers but no complete list of his birds seems to have been extracted and critically examined. Many of the entries are simply local lists of doubtful value; some are unrecognisable to the casual reader; others are of outstanding interest when examined carefully; and one at least is a unique and invaluable scientific record. The following is a systematic list of the species named in the two books, identified as nearly as possible. If the annotations should stimulate scholarly objection, argument or discussion this paper will have served a useful purpose.

With regard to Martin's dates, which have puzzled many readers, it was pointed out by Fisher that, owing to the alteration to the calendar in 1752, eleven days have to be added to all dates given.

Great Northern Diver. 'Bonnivochil' (North Uist) and 'Bunivochil' (Skye) are phonetic renderings of Bun-bhuachaill (Gray), although Martin's descriptions are scarcely recognisable. If the specimen killed by the minister of North Uist did weigh sixteen pounds and one ounce this suggests that it was a White-billed Diver.

Red-throated Diver. The 'Sereachan-aittin' of North Uist appears to be a phonetic rendering of Deargan-aodann; from dearg (red) and aodann (face or front) (compare deargan-allt—Red-necked Phalarope; and deargann—flea) although Martin transposed the red colour to the bill. Gray refers to the Hebridean belief that this bird expresses grief on being robbed of its eggs in loud and melancholy lamentations. 'Rain-goose' (North Uist) is also one of the divers, probably also the Red-throated Diver.

Leach's Petrel. 'Gawlin' (North Uist) is a phonetic rendering of gobhlan; Nicolaisen gives gobhlan-mara (Gobhal—fork; gobhlan-gaoithe or gobhlachan-gaoithe—Swallow). The 'Goylir' (North Uist), which is said to be a sea-bird "about the bigness of a swallow," is presumably a variation—gobhlar. The seamen are said to have called them 'malifigies,' which could be a corruption of 'maalie,' which is a common seaman's and Shetland name for the Fulmar, and bheag (small), *i.e.* 'little petrel.'

Storm Petrel. 'Assilag.' Martin's illustration in *A Late Voyage to St Kilda* was used by Sibbald to identify a specimen shot near Leith: the description is accurate so far as it goes. 'Lintwhite,' to which he compares the assilag in size appears to be a direct translation of Nicolaisen's gealan lin (Linnet), but this was altered to 'linnet' in the fourth (revised) edition of 1753.

Manx Shearwater. Martin confuses Manx Shearwaters and

Black Guillemots, but careful examination shows that all his 'Puffins' are shearwaters. In his list of the birds of St Kilda he names it correctly as 'scraber' (Nicolaisen's scrabaire), and decribes its behaviour well—". . . it is never to be seen but in the Night, being all the Day either abroad at Fishing, or upon its Nest, which it digs very far under Ground, from whence it never comes in Day-light"; but his description of the adult is of the Black Guillemot, and he refers to the young bird as "the young *Puffin.*" He refers also to the dogs in St Kilda being "... very dexterous in climbing and bringing out from their Holes those Fowls which build their Nests far under Ground, such as the *Scraber, Puffinet,* &c." There were said to be both 'coulter-neb' and 'puffin' on Sula Sgeir, but 'the *Puffin*' which on Rum builds "in the Hills as much as in the Rocks on the Coast" can only be the Manx Shearwater, and the 'Lyre' of Orkney is unmistakable (note, *lire* in Norwegian, but *skraape* in Danish).

Martin refers also to "The Rock *Linmull* . . . abounds with Sea-fowls . . . such as the *Gillemot, Coulter-neb, Puffin,* &c.", and to "The *Lyra-Skerries* [Shetland]), so called from the Fowl of that name that abound in them." The former is the Stack of Lianamull, Mingulay, figured by Harvie-Brown and Buckley, where shearwaters formerly bred but were later driven out by Puffins; and the latter is a large stack off Papa Stour where no shearwaters nest today but where they did so formerly according to name and old records (Venables). This may well have been the case on Sula Sgeir also and points to an ecological succession with changes in the soil, vegetation and birds on stacks and small islands which would be well worth further study.

Fulmar. As a British breeding species the Fulmar was of course restricted to St Kilda in Martin's time, and he was probably the first person to use the name in English. His illustration, though somewhat grotesque, is recognisable if only from the beak, which is well drawn, and his description of the bird tolerably accurate. The Fulmar was believed by the St Kildans to "pick Food out of the Backs of living Whales" and was recorded correctly, in the earlier account, to eject "a Quantity of pure Oyl out at its bill" on being approached. The story seems to have improved in the telling for by 1703 had grown to "about a Quart of pure Oyl," which was caught in a wooden vessel as ejected, or else the bird was caught by a noose round the neck and the oil so retained.

Use was made by the St Kildans of every part of the Fulmar; the flesh as food was preferred to that of any other bird; the eggs were extensively eaten (this species and the Great Auk being the only seabirds said not to re-lay); the oil was used not only for lambs but also medicinally both

internally and externally; the feathers were exported for bedding; the long bones used as plaid brooches; and finally the carcase bones, wings and entrails were added to the straw for compost.

Gannet. Away from St Kilda, Martin makes only casual mention of the 'Solan Goose' on Ailsa Craig*, Orkney and Sula Sgeir, and it is surprising that he does not say anything about the expeditions from Ness, faithfully recorded earlier by Dean Monro. With regard to the Gannet on St Kilda he has a great deal to say and *inter alia* seems to have been the first person to place on record the observation which a quarter of a millenium later led Wynne-Edwards to the conclusion that "... not only gannets, but perhaps even birds generally, do not normally need to employ their full 'manpower' in order to produce the year's recruitment quota," or, in Martin's words, "There is a tribe of barren *Solan* Geese which have no Nests, and sit upon the bare Rock; these are not the Young Fowls of a Year Old, whose Dark Colour would soon distinguish them, but Old ones, in all things like the rest; these have a Province, as it were allotted to them, and are in a separate State, having a Rock Two hundred paces distant from all other; neither do they meddle with, or approach to those hatching, or any other Fowl; they sympathize and fish together; this was told me by the Inhabitants, and afterwards confirmed several times by my own Observation." Elsewhere he extends this to other species—"There are some flocks of barren Fowls of all kinds, which are distinguished by their not joyning with the rest of their kind, and they are seen commonly upon the bare Rocks, without any Nests."

Enormous numbers of Gannets were taken for food on St Kilda, but the validity of Martin's figures is discussed by Gurney. The most interesting point in this context is the description of the method used to ensure that the crop of Gannets was adequately harvested—"In this Rock [Stack Li] the *Solan* Geese are allowed to hatch their first Eggs, but it is not so in the Rocks next to be described; and that for this Reason, that if all were allowed to hatch at the same time, the Loss of the Product in one Rock would at the same time prove the Loss of all the rest, since all would take Wing pretty nearly at the same Time," and later, "... from their coming in *March* till the Young Fowl is ready to fly in *August* or *September* according as the Inhabitants take or leave the First or Second Eggs ... The *Solan* Goose comes about the middle of March with a S.W. Wind, warm Snow or Rain, and goes away, according as the Inhabitants determine the Time, *i.e.* by taking away or leaving its Egg, whether at the First, Second, or Third time he lays."

*Gurney (1913, p. 319), misinterpreting Martin's Islesay (Ailsa), wrongly attributes to him the view that Gannets are numerous on Islay.

Cormorant and **Shag.** No clear distinction is made and they are referred to indiscriminately as 'Cormorants,' 'Sea Cormorants' and 'Scarts,' recorded from Haskeir Rock (North Uist), Skye and Tiree. Both species were eaten although the Cormorant seems to have been preferred as it was said in Skye that the "*Sea Cormorant* . . . if perfectly Black, makes no good Broth, nor is its Flesh worth eating, but that a *Cormorant,* which has any white Feathers or Down, makes good Broth, and the Flesh of it is good Food."

Heron. The 'Cranes' of Skye were probably Herons, of which Martin himself had seen a flock of sixty on the shore.

Duck sp. 'Ducks' are listed for Orkney, but nowhere else.

Eider. This is Martin's 'Colk,' correctly spelled Colc (there is no 'k' in Gaelic) which seems not to have been plentiful, and was said to be found only in the remotest islands such as Heisker, Sula Sgeir and Rona. His spectacular description is reminiscent of Dean Monro's, though lacking the attractive archaic detail of the latter.

Goose sp. 'Geese' are listed for Orkney without comment, and on North Uist are "plentiful here and very destructive to the Barley, notwithstanding the many methods used for driving them away both by Traps and Gun-shot." This almost certainly would refer to the native Grey Lag Geese. A note that "the Rock *Heisker,* on the South end [of Canna] abounds with wild Geese in *August,* and then they cast their quills," refers obviously to a moult migration of a pattern which may no longer exist in the much depleted stocks of Scottish Greylags.

Martin is uncritical of the belief still prevalent in Orkney in the genesis of the Cleck-Goose, although he covers himself by observing that he "never saw any of them with life in them upon the Tree."

Whooper Swan. 'Swans' are listed for Orkney, where at that time the Whooper was still a breeding species, but in the Western Isles Martin's only record is for North Uist where they "come hither in great Numbers in the Month of *October* . . . and live in the fresh Lakes . . . till *March.*"

Golden Eagle. Called the 'Black Eagle' in distinction from the 'Grey' or 'Sea Eagle' and said to be much more destructive to stock. Golden Eagles are recorded from Harris, Skye and North Uist, and in this last island both species of eagle were said to kill deer by fixing their talons in the beast's forehead and, by flapping the wings in its face, driving it over a cliff or into a ditch: several eagles might thus join in harrying one deer.

White-tailed Eagle. The 'Grey Eagle' of Martin, said to be larger than the Black Eagle, bred in Eilean Mor of the

Shiants, in Harris, North Uist, Skye, St Kilda, Orkney and Shetland. The Shiants eyrie was still occupied in 1888 (Harvie-Brown and Buckley), and this pair was said to hunt only on the mainland and never to kill lambs on the island. The St Kilda pair also "... have their Nest on the North end of the Isle ... make their Purchase in the adjacent Isles and Continent, and never take so much as a Lamb or Hen from the Place of their Abode." In North Uist, fish, commonly salmon, were taken; in Orkney the eagles were "... so strong as to carry away Children," which in fact happened to a child in Skye, who was subsequently saved and known thereafter as Neil Eagle.

Peregrine. The 'hawks' of the Scottish isles were evidently held in high esteem by falconers, those of St Kilda being reckoned the finest of all and those of Fair Isle the finest in Shetland. The Fair Isle Peregrines were known to hunt grouse in Orkney. The vassalage of Barra was £40 and a hawk annually. Other sources of hawks were Harris, North Uist, Skye and Mull.

Red Grouse. Known as 'Muir-Fowl' and 'Heath Hen': listed for North Uist, Skye and Mull.

Ptarmigan. Recorded from North Uist, Skye and Mull without comment.

Black Grouse. Recorded from Skye and Mull.

Pheasant. Without comment in the list of birds of North Uist.

Corncrake. Listed for St Kilda and North Uist. In the latter it is said to be "... of a brown Colour, but blacker in harvest than in Summer": perhaps these autumn birds were Water Rails.

Oystercatcher. Recorded from Skye and St Kilda; called by Martin the 'Tirma' or 'Sea-Pie' (also 'Sea-Pye'), and known as 'Trilichan' in St Kilda, where it "comes in May and goes away in August."

Plover sp. 'Plovers' are in the list of birds of North Uist, Skye and St Kilda. There is also a charming and somewhat unusual account of bird protection—unusual at this period as being solely for sentimental reasons—"There is a great Flock of Plovers, that come to this Isle [Fladda Chuan] from *Skie,* in the beginning of *September,* they return again in *April,* and are said to be neer two thousand in all; I told the Tenant he might have a Couple of these at every meal during the Winter and Spring, but my motion seem'd very disagreeable to him: For he declared that he never once attempted to take any of them, tho he might if he would, and at the same time told me, he wondred how I could imagine, that he would be so Barbarous, as to take the lives

of such innocent Creatures as came to him only for Self-preservation."

Arctic Skua. The 'Faskidar' of North Uist "... is observed to fly with greater swiftness than any other fowl in those parts, and pursues lesser fowls, and forces them in their flight to let fall the Food which they have got, and by its nimbleness catches it, before it touch the Ground."

Gulls spp. Little is said about gulls except in a vague reference in the passage on Skye to "*Malls* of all kinds," and on St Kilda where "There are three sorts of *Sea-Malls* here; the first of a grey Colour, like a Goose, the second considerably less, and of a grey Colour; and the third sort white, and less in size than a Tame Duck; the Inhabitants call it *Reddag;* it comes the fifteenth of *April* with a S.W. Wind, lays its Egg about the middle of *May,* and goes away in the Month of *August.*" This is the Kittiwake, Reddag being correctly spelled Ruideag.

Razorbill. Not recorded by Martin except on St Kilda where it was called the 'Falk' (more correctly Falc). "It lays its Egg in *May,* its Young take *Wing* the middle of *July,* if the Inhabitants do not determine its Stay longer, by taking the Egg."

Great Auk. Martin's account of the Great Auk on St Kilda is brief, accurate, and almost as much as anyone has been able to tell us subsequently. "The . . . *Gairfowl,* being the stateliest, as well as the largest Sort, and above the size of a *Solan* Goose, of a black Colour, red about the Eyes, a large white Spot under each, a long broad Bill; it stands stately, its whole Body erected, its Wings short, flies not at all; lays its egg upon the bare Rock, which, if taken away, she lays no more for that Year; she is whole-footed and has the hatching Spot upon her Breast, *i.e.* a bare Spot from which the Feathers have fallen off with the Heat in hatching; its Egg is twice as big as that of a *Solan* Goose, and is variously spotted, Black, Green and Dark; it comes without Regard to any Wind, appears the first of *May,* and goes away about the middle of *June.*"

Guillemot. Martin's 'Lavy' (correctly Labhaidh or Lamhaidh). Apart from St Kilda, where it is discussed in considerable detail, recorded on Sula Sgeir, Haskeir Rocks, Stack of Lianamull and Skye. While on St Kilda the daily ration of Guillemot eggs to the joint crews of Martin and the steward was eighteen per man as well as "a greater number of the lesser Eggs"—an estimated total of sixteen thousand eggs for the three weeks.

Puffin. 'Coulter-Neb,' 'Bowger' or 'Bouger,' also known to the fishermen around Ailsa Craig as "Albanich, which in the ancient Irish language signifies Scotsmen" (Sibbald's

albanoca; later albunac). Recorded for Sula Sgeir, Haskeir Rocks, Stack of Lianamull, Skye, Ailsa and St Kilda.

Black Guillemot. Mentioned only from St Kilda, where Martin refers to the 'Scraber, Puffinet, or Greenland Dove,' followed by a description of the Black Guillemot, but later refers to 'Scraber' and 'Puffinet' as separate species (Greenland Dove and Sea Turtle Dove are old names for the Black Guillemot).

Rock Dove. 'Pigeons' are recorded from North Uist, Skye and St Kilda.

Cuckoo. "Very rarely" seen on St Kilda, otherwise not mentioned.

Raven. The only breeding records are of pairs in Bernera, Harris, and the Monach Isles, although Ravens would undoubtedly be widespread elsewhere.

Carrion/Hooded Crow. 'Crows' are recorded from North Uist and St Kilda, but Martin states clearly that those in Shetland are Hoodies whereas all on the mainland of Scotland are Carrion Crows.

Wren. Mentioned in the St Kilda list.

Wheatear. The 'Stonechaker' of St Kilda.

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Isle of May Bird Observatory and Field Station Report for 1965

Prepared for the Observatory Committee by NANCY J. GORDON, *Honorary Secretary*

The Observatory was manned for a total of 155 days between 2nd April and 26th October 1965, with a very brief visit on 8th November. The number of observer nights (618) was considerably higher than in recent years.

The spring migration was well covered, although there were five small gaps of a day or two in April and May. Observers in late April were rewarded by a spectacular arrival of Robins, Dunnocks and other species from the continent. There was also good coverage in early autumn, with only one small gap in September, but a good deal of migration was missed in October. The falls of small passerine migrants during the first few days of September and October were some of the largest ever witnessed on the May.

No new species were seen or ringed in 1965, but two subspecies were recorded for the first time; a Northern Treecreeper *Certhia familiaris familiaris* on 12th September and a Scandinavian Rock Pipit *Anthus spinoletta littoralis* on 27th May.

Spring migration

Observers were on the island 2nd-12th, 15th-19th, 21st-29th April; 2nd-5th, 8th-28th May; 5th-12th June.

April. Little migration was recorded until the end of the month. The first week, with mainly west winds, produced a trickle of Wheatears (up to 15 daily) and Meadow Pipits, though after a day's southeast wind the first Chiffchaff arrived on the 4th, with 15 Goldcrests. The wind shifted to southeast on the 7th, and the morning of the 8th brought a Woodcock, a Song Thrush, 7 Mistle Thrushes, 36 Fieldfares and 5 Greenfinches. There was a similar mixture on the next two mornings, with the addition of a few Bramblings; on the 10th a Green Sandpiper and 12 Whooper Swans were recorded. After this, westerly winds increased to gale force and no migrants were seen until a return of southeasterly winds brought a few Chiffchaffs and finches on 21st and 22nd. These were joined on the 23rd by one Redstart and two Black Redstarts before the wind changed; little except Wheatears, Linnets and Meadow Pipits passed through during the next four days. The 28th started overcast, with a

moderate northeast wind and few migrants, but by 10 a.m. the island was filling with Robins (about 150, mainly Continental), accompanied by 20 Fieldfares, 15 Song Thrushes, 10 Ring Ouzels and 8 Blackbirds. In the afternoon there was a second wave of arrivals, this time mainly Dunnocks (well over 200), Bramblings (25) and a Great Grey Shrike. That night saw a further influx, and on the 29th Robins totalled 400-500 and Dunnocks 300, with 10 Bramblings, 18 Fieldfares and 3 Willow/Chiffs. According to the lightkeepers, the movement abated over the next few days (when there were no observers in residence).

May-June. Many Robins and Dunnocks remained on the island through the foggy spell of the first few days of May, joined by fresh arrivals. Clear weather followed a change to west winds at midday on the 4th, bringing a coastal movement of warblers (20 Willow Warblers, 5 Chiffchaffs, 2 Lesser Whitethroats, 1 Garden Warbler, 1 Sedge Warbler and 1 Whitethroat), 15 Bramblings, 2 Ring Ouzels, a Cuckoo and a Tree Sparrow. West winds persisted until the 10th but returned to southeast 10th-15th, when a few Whinchats, Redstarts, Swallows, Blackbirds, Wheatears, Sedge Warblers (up to 15), Grasshopper Warblers, Whitethroats (up to 25), Willow Warblers (up to 50) and Linnets (up to 15) were recorded. A Whimbrel was seen on the 10th, 2 Tree Sparrows and 3 Common Sandpipers on the 14th, a Mealy Redpoll, a Pied Flycatcher and a Cuckoo on the 15th, a Black Redstart on the 13th and the last three Fieldfares of the spring on the 15th. Little was seen over the next few days, in variable winds and good visibility, but some easterly drizzle on the 21st and 22nd brought a few warblers, a Cuckoo and a Turtle Dove. The movement increased over the next two days, and included an Icterine Warbler, two more Turtle Doves and 4 Lesser Whitethroats on the 23rd, and a Bluethroat and more whitethroats (both species) on the 24th. The last notable bird in May was an Osprey flying north on the 26th. A few migrants occurred in early June—a Whimbrel on the 5th and 6th, a Spotted Flycatcher and a Mealy Redpoll on the 6th, and a Blackcap on the 10th.

Autumn migration

The Observatory was manned 2nd-31st August; 1st-18th, 22nd-30th September; 1st-7th, 8th-11th, 15th-18th, 22nd-26th October. The island was briefly visited also on 8th November.

August. Winds were westerly until the 7th with few migrants (a Whitethroat on the 5th, a Sedge Warbler and 2 Whimbrels on the 7th). Although the wind then changed to the east, the next few days saw only a trickle of warblers

(and a Green Sandpiper on the 12th). The first real movement came with strengthening winds on the 14th, especially during the afternoon. Two Pied Flycatchers, a Spotted Flycatcher, 12 Garden Warblers, 1 Barred Warbler, 6 Whinchats, 2 Redstarts, 1 Ruff and 3 Dunlins were recorded, and at full tide the flocks of Turnstones and Purple Sandpipers were much bigger than usual. The migration continued during fog and east or variable winds until the 18th, with much the same pattern. It brought a few more Pied Flycatchers and Garden Warblers, a Wood Sandpiper on the 15th, an influx of 50 Willow Warblers on the 16th, 12 Whinchats on the 17th and a very early Woodcock. A final small influx at midday on the 18th added a Cuckoo and a Treecreeper, and the autumn's first Goldcrest. Most of these birds left during the fine westerly weather of the following week, though an unusually large flock of Whimbrels (22) was seen on the 20th, and between 10 and 26 Swallows were recorded daily from the 22nd to the 25th. There was another arrival of Willow Warblers (35), along with a Redstart, a Whitethroat and a Woodcock, on the 24th, and slight wader passage on the 25th. The steady trickle of Wheatears during the month increased to 30 on the 27th, but winds remained west and the only migrants at the end of August were a few Meadow Pipits and warblers, a Little Stint on the 29th, a White Wagtail on the 30th, 7 Golden Plovers and 4 Whimbrels on the 31st and shearwaters out at sea.

September. On the afternoon of the 1st the wind veered to ENE and a handful of Goldcrests and Willow Warblers heralded an unprecedented few weeks of visible migration. There was still only a trickle of birds on the 2nd (3 Pied Flycatchers, 1 Garden Warbler, 2 Song Thrushes, a Whinchat and a Red-backed Shrike), but after overnight fog a large number of migrants appeared at dawn on the 3rd and continued to arrive during the day. They were assessed at 200 Garden Warblers, 3 Barred Warblers, 19 Willow Warblers and Chiffchaffs, 30 Whinchats, 40 Redstarts, 10 Whitethroats, 10 Robins, 1 Reed Warbler, 1 Spotted and 50 Pied Flycatchers, 4 Wrynecks, another Red-backed Shrike, 2 Ring Ouzels, a Redwing, 2 Goldcrests and a Green Sandpiper. During the next two days there was some coastal movement of Swallows (14 on the 4th, 76 on the 5th), House Martins (35 and 155), Sand Martins (10 and 21) and Tree Pipits (10 and 20). New arrivals on the 4th were a Bluethroat, the autumn's first Fieldfare, 2 Reed Warblers, a Red-breasted Flycatcher, 2 Wrynecks, 12 Golden Plovers and 5 Common Sandpipers. Most of the migrants moved on as the visibility improved after the 4th, but a steady movement of passerines continued, becoming mainly coastal when the wind settled

westerly on the 8th. A few more Wrynecks were recorded during this week, a Bar-tailed Godwit was seen on the 6th, and Swallow numbers reached 200 and House Martins 20 on the 8th. Wheatears increased to 30, and Whinchats and Redstarts to 20 each on the 7th, and warblers, flycatchers and Goldcrests continued to pass through. On the 10th about 500 Meadow Pipits on passage were counted. A return to east winds on the 12th brought 20 Pied Flycatchers, 6 Siskins and a Treecreeper (Northern), followed overnight by 2 more Wrynecks and 6 Goldcrests. There was then little movement until the next spell of east winds on the 23rd, which produced at sea a Red-throated Diver, skuas and terns, and the first autumn record of a Blue-headed Wagtail, a few Goldcrests, Whitethroats, Pied Flycatchers and Garden Warblers. The 24th saw a limited movement of Turdidae, the first for some time—6 Fieldfares, a Song Thrush and 2 Ring Ouzels—with 2 Redwings next day. There was next a massive influx on the 26th in poor visibility, including 200 Fieldfares, 400 Song Thrushes, 150 Redwings, 50 Ring Ouzels, 20 Blackbirds, 80 Whinchats, 150 Redstarts, 60 Robins, a Bluethroat, a Reed Warbler, 20 Blackcaps, 180 Garden Warblers, 3 Whitethroats, 1 Lesser Whitethroat, 5 Willow Warblers, 10 Goldcrests, 2 Spotted and 80 Pied Flycatchers, 38 Siskins, 50 Chaffinches, 30 Bramblings, an Ortolan Bunting, a Red-backed Shrike, a Hoopoe, a Ringed Plover and a Jack Snipe. Most of these birds had moved on by the 27th, but a further arrival in northwest winds on the 28th included over 250 Redwings, 15 Fieldfares, 15 Ring Ouzels, a Barred Warbler, a Yellow-browed Warbler, a Lapland Bunting and the first two Snow Buntings of the season. There was still some movement in east winds over the last two days of the month, with a Sparrowhawk and a Ruff on the 29th, and a Reed Warbler on the 30th.

October. The weather and migration pattern of the first eleven days resembled that of early September. Small movements on the 1st (a Red-breasted Flycatcher, a Lapland Bunting, 50 Goldcrests and 100 Chaffinches) built up to a large fall on the 2nd, the most spectacular items being 800 Song Thrushes, 150 Redwings, 25 Redstarts, 60 Robins, 25 Blackcaps, 15 Garden Warblers, 5 more Lapland Buntings, a Black Redstart and another Jack Snipe. Most of these moved on overnight but a Merlin, a Lesser Whitethroat and another Red-breasted Flycatcher appeared on the 3rd. On the 4th Turdidae movement increased, Chaffinches were passing, and a Wryneck was seen; the 5th saw a small influx of warblers. Another large fall of Turdidae occurred overnight 6th/7th in bad weather, when 400 Song Thrushes, 40 Bramblings and 12 Reed Buntings were counted, thrush numbers re-

maining high until the 10th. A Great Grey Shrike arrived on the 9th, a Bluethroat on the 10th and a Stonechat on the 11th. After this, winds reverted to the west and the island's temporary bird population dwindled gradually, with only small fresh arrivals. These included a flock of 7 Waxwings on the 17th (up to 4 on a day were seen during the following week). Observer cover was patchy for the last half of October, but there were undoubtedly some fairly large arrivals of Turdidae and Bramblings with a few Redpolls at the end of the third week. An influx at the end of the month unfortunately went unrecorded, but as late as 8th November there were at least 300 Blackbirds on the island, 5 Redpolls and 2 Woodcocks.

Unusual occurrences

Little Grebe. One, 23rd-24th October. First record since 1942.
Tufted Duck. One, 8th November. Second record (first since 1908).
Whooper Swan. Seven, 15th October. Sixth record.
Buzzard. One, 28th September. Seventh record.
Osprey. One, 26th May. Sixth record.
Whimbrel. Twenty-two, 20th August. Largest flock ever recorded.
Wood Sandpiper. One, 15th-18th August. Fifth record.
Hoopoe. One, 26th September. Eighth record.
Treecreeper. One, 12th September. First definite record of Northern race.
Whinchat. Eighty, 26th September. Record high number.
Bluethroat. One, 10th October. Latest autumn record (Red-spotted).
Robin. 400-500, 29th April. Record total for one day.
Icterine Warbler. One, 23rd May. Second spring record.
Garden Warbler. 200, 3rd September. Record total for one day.
Red-breasted Flycatcher. One, 4th-5th September. Earliest autumn record.,
Rock Pipit. One, 27th May. First record of Scandinavian race.
Blue-headed Wagtail. One, 23rd September. First autumn record.
Waxwing. Up to seven between 17th and 25th October. Seventh and earliest autumn record.
Great Grey Shrike. One, 28th April. Second spring record.

Breeding populations

A count was made of Shag nests in late May. The total of 751 shows that this species is still increasing as a breeding species, both on the cliffs at the south end of the island, and on the more recent sites on Rona and at Tarbet. The number of Puffins may have decreased slightly, and fewer Fulmar chicks were reared (only four seen in July). A single pair of Great Black-backed Gulls bred for the fourth successive year. A pair of Dunnocks reared two young in the Top Trap; the pair of Blackbirds nested again; the Swallows, though present, failed to rear a brood.

Ringing and recoveries

2,859 birds of 63 species were ringed. Had the last would-be visitors of the season not been thwarted by the stormy weather in their attempts to land, the 1965 total would easily have exceeded the 1951 record of 2,901. A record number of 445 Shags contributed to the year's total, and other records were: Puffins (36), Song Thrushes (111), Redstarts (114), Blackcaps (58), Chiffchaffs (32), Pied Flycatchers (65) and Rock Pipits (139). The total for Garden Warblers (202) is almost double the previous highest, and that for Dunnocks (151) three times the previous best. The number of Blackbirds ringed (90) was the lowest for nearly ten years.

Many of the 93 recoveries were of Shags involved in 'wrecks' as far south as Essex during the cold spell from late October to early December. The following recoveries from abroad were notified:

		Ringed	Recovered	
Song Thrush	Ad	22. 3.64	Escurial, Caceres, Spain	8. 2.65
Blackbird	Ad ♂	26.10.63	Quimperlé, Finisterre, France	14. 2.65
Blackbird	1st W ♀	26.10.64	Askim, Ostfold, Norway	31. 3.65
Blackbird	Ad ♂	6.11.62	Sokndal, Rogaland, Norway	1.11.64
Blackbird	Ad ♀	3.11.62	Nortorf, Schleswig-Holstein, Germany	14. 7.65
Blackbird	FG ♀	5.11.63	Skarup, Svenaborg, Denmark	11. 7.65
Blackbird	Ad ♀	1.11.63	Onarheim, Tysnesoy, Norway	8. 8.65
Blackbird	Ad ♂	26.10.63	Norre Vissing, Tulstrup, Denmark	19. 9.65
Robin	FG	29. 4.65	Skjeberg, Sarpsborg, Norway	13. 9.65
Robin	FG	29. 4.65	Nouzilly, Indre et Loire, France	20.10.65
Garden Warbler	Ad	5.10.65	Baracaldo, Vizcaya, Spain	25.10.65
Willow Warbler	Ad	13. 5.65	Ben-Ahmed, Casablanca, Morocco	10.10.65

Other observations

A few rabbits survived the attack of myxomatosis in July 1964, and their numbers are beginning to increase again slowly. As yet there do not appear to be more than a few dozen. As a result of the scarcity of rabbits the vegetation was extremely dense and luxuriant in 1965, with spectacular flowering of sea pink and sea campion.

No change in the seal population has been observed; no pups were born.

A study of the lichen flora of the island was carried out by Messrs B. W. Ferry and J. W. Sheard of London University in August. They identified more than 78 species.

Once again the Committee wishes to thank the Principal Keeper and staff for all their help given to the Observatory during the season.

Short Notes

Autumn notes from the Isle of Iona

There are surprisingly few published accounts of the birds of this much-visited little island. Apart from Graham's fascinating book *The Birds of Iona and Mull,* published in 1890, which contains notes dating from the second half of the 19th century—and it is not always clear how far what he records is relevant only to Mull—we have been able to trace only the scattered notes made from personal visits which appear in the more general works by Gray, *Birds of the West of Scotland* (1871), Harvie-Brown, *A Vertebrate Fauna of Argyll and the Inner Hebrides* (1892), and more recently, Baxter and Rintoul, *The Birds of Scotland* (1953). We visited the island from 4th to 18th September 1965 and compiled a full list of what we saw during our visit, which we have lodged in the S.O.C. Library, 21 Regent Terrace, Edinburgh.

No note could, of course, be made of breeding populations, nor was anything seen of the wide variety of wintering duck which is such a feature of Graham's book. However, a number of small passerines were spotted on migration of which we could find no previous record; and it is worth noting that the Golden Oriole which was recorded on Iona on 27th May 1965 (*antea* 3: 374) appears also to have been a new bird for the island. On the other hand a number of species which were common in September throughout Graham's time have disappeared. The Chough is a familiar example; more surprising was the complete absence of Dunnocks. Greenfinch, Yellowhammer and Corn Bunting are all recorded as common by Graham, the last being "very abundant." The withdrawal of these species from Iona, as from most of this part of the West Highlands, was noted in 1948 by Baxter and Rintoul, and the only records we have found since then are of three Greenfinches seen by us in September 1965 and of a single Yellowhammer reported in July 1964.

The following records appear to us to be of more particular interest:

Grey Lag Goose. One seen moving south off west side of the island, 6th September.

*Knot. One on 8th, three from 13th to 16th September, with small numbers of Sanderling, Ringed Plover and Dunlin in the large bay fringing the machair on the west.

Collared Dove. First noticed (two) August 1963, with up to 13 in mid August 1964 (3: 299). Two in September 1965, roosting in trees of manse garden and feeding with hens nearby, but no sign of their having bred.

Rook. Graham mentions this as a winter visitor only, crossing from the mainland by day to feed and returning just before dusk. Similar habits noticed in September 1965, and though they occasionally frequented the trees of the manse garden there was no sign of their having bred there.

*Blue Tit. A single bird in the manse garden on 12th and 13th September.

*Whinchat. A single bird on 6th September.

*Garden Warbler. One on 12th September in the manse garden.

*Lesser Whitethroat. One watched at close quarters in a tree by the post office, 13th September.

*Goldcrest. Two to three in manse garden with a few Willow Warblers and a Spotted Flycatcher, 12th and 13th September.

*Tree Pipit. One on 12th September.

*No previous record traced.

W. M. Kerr, J. A. D. Hope.

Purple Heron at Fair Isle

E. J. Wiseman found a Purple Heron feeding in a ditch on the Leogh croft at 1400 hrs GMT on 17th June 1965. It flew off and landed in a marsh about half a mile away, where we both watched it stalking along a ditch and later skulking in a field of half-grown oats. It was thought to be an immature coming into adult plumage.

It was slightly smaller than a Heron, and a darker bird, both on the ground and in the air; crown and nape blackish, but a distinct blue colour on forehead when bird faced observer at close range; sides of head warm buff, with dark line from eye to nape; neck orangy buff with dark line running from gape, below eye, down side of neck; mantle and back brownish grey, with scapulars warm chestnut-buff and grey, paler than back; rump and tail grey brown; chin and cheeks white; throat paler than sides of neck; breast pale buff with long brown stripes; sides of body rich maroon brown; rest of underparts paler chestnut-brown; primaries and secondaries dark greyish black; coverts paler with golden tinge; allula paler; in flight, wings darker than a Heron's; underwing pale brown with maroon band on underwing coverts; bill long and orange-brown, with ridge of upper mandible and tip darker; legs greenish brown, paler from behind, and soles paler; iris yellow.

In flight the shape was noticeably different from a Heron's; the neck was more bulging when viewed from the side and narrower from behind, and the feet looked larger.

We left it in the field of oats and it was later seen by James Wilson and Marina Dennis. It frequented the ditches in these two areas until 22nd June. This is the first record for Fair Isle and Shetland and the fifth for Scotland, the last being seen in Berwickshire on 8th April 1917 (*Scot. Nat.* 1917: 214).

Roy H. Dennis.

Little Bitterns in Ayrshire and Shetland

On 18th May 1965 DJ and ABJ flushed a bird from the north bank of the River Ayr at Craigie Park, Ayr. It remained in full view on the opposite bank long enough for them to note with the naked eye that it stood about 10" high in the hunched attitude of a bittern or small heron and had blackish upperparts with pale wing patches. They were sure it was a Little Bittern, and telephoned GAR that evening.

Next morning DJ and ABJ on the north bank, and GAR on the south, saw it standing erect among reeds on an island 20 yards from the original area. It soon walked in full view onto the mud, pausing to stretch full length vertically, when the bittern outline with elongated lower breast feathers was accentuated. A few minutes later it flew to within 10 yards of GAR, where it stood in a hunched attitude and speared a 2" fish. It then climbed over a bush which had hidden it from the other observers and into full view on the mud. When approached to within 5 yards it crouched flat along the ground with head on one side before flying upstream. In flight the legs were not fully retracted, and the wing action was very similar to a Moorhen's; the pale oval wing patches contrasted with the black wings and upperparts.

The following description was obtained with the sun shining from behind by GAR using 10x50 binoculars at 5-10 yards:

> All upperparts black, faintly glossed green; pale buff line over eye; ear coverts and sides of neck pale mouse-grey; throat and breast rich buff with lower feathers elongated; belly and under tail-coverts pale buff; wings black with oval buff patch on coverts, pinkish on lesser and median, greyish on greater; bill medium length, pale horn with blackish ridge on upper mandible and tip (¼" or so) whitish; lores yellowish-green; legs and feet bright green; iris bright yellow.

This male is the second Little Bittern recorded in Ayrshire; the first was found dead in Ayr on 30th April 1947 (*Scot. Nat.* 1954: 66).

D. Johnstone, A. B. Johnstone, G. A. Richards.

At 2100 hrs GMT on 2nd June 1965 I found a small heron-like bird by the Loch of Gards at Scatness in the south of Shetland Mainland. I had only a fleeting glimpse of it that evening, but was able to get a full description the following morning. R. H. Dennis was given the description by telephone and identified it as a female Little Bittern. It was seen also by W. Horne and Dennis Coutts, who photographed it.

RHD came over from Fair Isle on the 4th and we studied the bird for over two hours but failed to catch it. At ranges down to 15 ft in good light we took a full description and confirmed that it was a female Little Bittern.

The Loch of Gards, about 10 ft a.s.l., is surrounded by short vegetation, with small marshy areas at each end. It is a small loch in open rough grazing criss-crossed with stone dykes. During the week it was seen the bird spent most of the time at the water's edge, resting on its tarsi with head retracted into hunched shoulders and bill held horizontal over the water. Occasionally it stalked along the bank, when the strange disjointed movement of the body and legs was most unbirdlike. It was once seen catching and quickly eating a small fish.

At the first sign of danger the body was pressed flat to the ground, and the extended neck and bill pointed skywards; the breast and throat feathers were fluffed out and the dark stripes seemed to predominate, giving the impression of dark lower stems of waterside plants. If danger persisted, a second stance was adopted: the body was raised from the ground and the bird visibly elongated in a bill-pointing posture; the body was slowly rotated so that the breast was always directed towards the intruder. In this position the dark stripes seemed to narrow, and the resulting lighter colour was similar to dried reeds. If approached from behind, the bird seemed undecided which stance to adopt and more readily took wing. The flight was buoyant and typically bittern in character, although the lazy wing beats and the long legs held stiffly behind were also like a heron. On take-off the light wing patches and long dangling legs were most obvious. The following description was compiled from notes taken on our combined visit:

> Size similar to small Lapwing (by comparison with Kittiwakes and Starlings nearby). Crown and nape grey-brown; mantle and scapulars brown with pale margins, giving streaky appearance; rump and tail uniform dark brown; underparts pale buff with long brown-buff streaks on sides of throat and flanks; at rest, shoulders creamy buff; underwing pale; iris yellow; bill dull orange-yellow with dark horn ridge and tip; legs and feet greenish yellow, the tarsi appearing more yellowish viewed from the rear.

The bird was seen by numerous observers, including R. J. Tulloch. It was last seen on 10th June. One was taken at Fair Isle on 10th April 1940 (and two or three were reported seen there that summer) and there are two other Shetland records, the last being in Unst on 29th May 1917.

GODFREY D. JOY.

Harlequin Ducks at Fair Isle and in Caithness

On 11th January 1965 I noticed two small ducks diving close to the cliff in Maver's Geo, near the bird observatory on Fair Isle. I identified them as male and female Harlequin Ducks, the first time this species has been recorded at Fair Isle.

I went home to collect my binoculars, telescope and note-

book and returned at 1200 hrs to find them diving in the west side of the geo. Next day I found them round the headland in South Haven and they stayed in this general area until 2nd February. They were always swimming near the cliffs or over submerged rocks, where they dived in the roughest water with impunity. A favourite place was just below the bird observatory, where they allowed one to approach within 20 yards. During their stay they were seen by most of the islanders, and Tommy Russell, James Stout, James Wilson and Miss Kate Russell confirmed my identification. Between 11th January and 2nd February, I noted the following details:

Male. Small size between that of a Wigeon and a Teal, with round-headed and short-necked appearance; body very dark brown, with rusty flanks and a variety of white markings; bright white spot on ear-coverts; large greyish white patch at base of bill, stretching from forehead to throat; small white line down side of neck (hardly noticeable); broad curved white line in front of wings; narrow broken white band on side of neck, forming half collar; three elongated white spots on each side of back, the largest near the tail, forming narrow V when viewed from above; small bill lead colour; legs and feet appeared green under water. On 1st February I noticed that the male's plumage had become dark gunmetal blue between the collar and the broad line on the breast.

Female. Much the same dark brown colour, but white spot on ear-coverts larger, and there was less greyish white at the base of the bill, forming a spot above and below the bill; bill darker; legs and feet green.

GORDON BARNES.

On 18th April 1965 we found a pair of Harlequin Ducks on the sea a mile north of Wick. We watched them for 15 minutes in a sunny period between showers of snow and hail, with a fresh to gale force northerly wind blowing. Subsequently the birds were seen by many people, including Dr I. D. Pennie, D. Macdonald, D. M. Stark and other S.O.C. members. They remained in the same area and were last seen on 1st May. The account which follows is based on notes we took at the time and on additional comments by IDP and DM.

The birds were very lively, diving frequently (short dives of not more than 25 seconds) with the male usually following the female, the pair diving and surfacing together. When diving they would lift out of the water, except for their legs, and go over like a Shag; and when they came up, holding themselves straight, they would pop almost out of the water. On the surface they were very active, bobbing their heads down to the water (the female making a sort of sideways preening movement away from the male), hanging about in the surf below the cliffs, or paddling along, constantly flicking their wings and splashing. Their restless behaviour was quite unlike other ducks as they darted here and there

dabbing continually around, presumably at small creatures stirred up by the rough water. They spent a lot of time entering and leaving the surf and poking under the seaweed at the edge of the surf, giving an impression of resting on their bellies. The female was seen upending with feet paddling in the air. They were once noted out of the water on sloping rocks, walking with heads down (like Moorhens). They were never seen in flight, and no calls were heard.

The male was in full breeding plumage, and the striking head pattern, vivid white crescents on the dark blue neck and breast, bright chestnut flanks and small bill were clearly seen. The female could possibly have been mistaken for a Long-tailed Duck in size and shape but it was much more uniform and dark all over, particularly as at a distance the head seemed to be almost sooty black, contrasting with the white spot behind the eye. When the bird dived its underparts were seen to be dark.

The best views were had from the cliffs, as the birds readily moved behind rocks when approached. Against a background of white broken water, grey rock and russet weed exposed by the tide their striking colour pattern hid them most effectively.

Descriptions. Male. Front of neck blackish blue; rest of body grey-black, with conspicuous rufous flanks; uniformly dark underneath; white on front of face (very obvious on either side when seen from front) was more a patch than a crescent; white spot behind eye; white crescent down side of neck and another below round front of throat (these marks showing from the front as a pair of Vs one above the other and not joined at the tips); white vertical mark on side of body in front of wing; white patch on back; short up-pointed tail; small short wedge-shaped beak; legs seemed short.

Female. Dark brown with uniformly dark underparts; very conspicuous white circle behind eye; two smaller white circles, one above the other, in front of eye, but indistinct at times; legs noted as bluish when upended.

R. S. Shand, G. Gunn.

(These two records might well refer to the same two birds. The only previous acceptable Scottish records are of a drake seen in the Outer Hebrides on 13th February 1931 (*Brit. Birds* 23: 370) and a 1st-winter male shot in Roxburghshire on 16th January 1954 (*Scot. Nat.* 1954: 15). Although the 1931 record is a little incomplete it has been generally accepted, but a sight record of a drake in Shetland on 5th March 1933 (*Scot. Nat.* 1933: 152), though quoted in *The Birds of Scotland*, has been ignored by the authors of *Birds and Mammals of Shetland* and *The Popular Handbook of Rarer British Birds*, and seems rather too tentative to be admitted. A 1955 Shetland record (*Brit. Birds* 49: 36) was later shown to refer to a Long-tailed Duck (*Brit. Birds* 50: 445). One race of the species is

resident in Iceland and breeds also in Greenland and N.E. Canada; another race breeds in western North America and west into Siberia.—Ed.)

Gyr Falcons in East Inverness-shire and Shetland

On 24th March 1965 I heard from our neighbour, Mr J. Munro, Pitmain, Kingussie, that an unusual bird, perhaps two, had been flying overhead and flushing Woodpigeons from nearby pines. I went to investigate and together with Mr and Mrs Munro watched a bird now perched on a fence stob topping a stone dyke about 250 yards from the garden fence. There was then no sign of a second bird.

Through 10x binoculars in rather poor late afternoon light —the weather being dull—I noted that at this range the bird was obviously a falcon but looked longer than and differently proportioned from a Peregrine; the head seemed more prominent or relatively larger, and the tail distinctly longer, giving the bird a more attentuated outline. It appeared entirely white or grubby white, with slightly darker mantle and back.

It flew to a rather nearer post where, at about 200 yards, the prominent dark eye gave the face a distinctive appearance, probably increased by dark feathering around the eye; the hooked bill was an indeterminate lightish colour; head, neck and underparts white, without obvious markings; mantle and back evenly marked with dark spotting, giving a very chequered look; upperside of medium-long, straight tail showed regular faint barring but was otherwise white; feet not clearly seen but appeared pale.

The bird flew off over the moor and perched in a scrubby tree; it finally went off west, and the rear view in flight confirmed the longer tail and perhaps straighter wings than a Peregrine, the wings being held very flat when flying (long glides, alternating with several wing-beats). From below the wings showed dull dark tips in flight.

The bird disappeared from view remarkably quickly heading on a direct westward course. I got the impression that it was not very large or heavily built for a Gyr Falcon. Considering the whiteness of its plumage it was probably an immature male

It may be interesting to refer to a previously unpublished record of my own: the finding of a dead 'Greenland' Gyr Falcon—an immature bird in similar, if rather more strongly marked, plumage—on moorland a mile from the present spot in April 1958. The identification was confirmed by the staff of the Royal Scottish Museum who considered the bird had been dead a few weeks. I still have one of its wings.

Both these records have been accepted by the *British Birds* Rarities Committee. I had also several reports during the winter of 1964-65 of a white bird of prey in this area of Speyside which may have referred to the bird described above.

COLIN C. I. MURDOCH.

About noon on 9th September 1965, while I was moving between two of the hill plantations at Kergord, I happened to glance up and see a raptor appear over the crest of the hill above me at some considerable height. It was being persistently and fiercely mobbed by a female Merlin.

In size it was about as big as a Buzzard; in fact my momentary impression was that it was a Buzzard, but almost immediately I realised that it had pointed, not rounded, wings. The Merlin gave an excellent comparison of size, and it was obvious, especially as it moved lower, that the bird was several times as large as its aggressor, dwarfing it completely.

In shape it was not unlike a Peregrine but it seemed heavier and much slower-moving and was definitely much larger than the average Peregrine. The wings were long and very powerful-looking, being broad near the body, swept back slightly from the carpal joints, and tapering to perfect 'falcon tips' without any sign of the ragged appearance which is typical of a Buzzard. The tail was long and narrow but did not seem quite as tapered as in the commoner falcons. It appeared to become darker towards the tip, although the only dark band visible was the broad one very near the extreme end. There was no sign of any face markings such as the Peregrine shows, and the upperparts and the underparts, apart from the tail, appeared to be a uniform brown, very similar to a typical Buzzard.

It was only after noting these points and watching the bird for some time as it dodged the Merlin by a sideways rolling motion, rather like the rolling of a Raven, and circled easily above the plantations, that I realised I was looking at a Gyr Falcon, and, judging by the colour, a bird of the year.

After about ten minutes a small flock of Starlings left the plantation and started to fly up the hill. Falcon and Merlin went into one of the most spectacular power dives I have seen and were among them in a moment. They were unsuccessful, mainly because the Merlin was more interested in the falcon than in the Starlings, and they were soon above me, exactly as before. A few minutes later, however, they began to move off to the southwest, the falcon diving to about half height twice more, either for fun or to discourage the Merlin, and I watched them until they disappeared over the hill to the south.

WILLIAM G. PORTEOUS.

Capercaillie x Black Grouse hybrid in Perthshire

On 30th September 1965 S. F. Simmons and party, out on the hill between Loch Tummel and Blair Atholl, shot a Blackcock, a young cock Capercaillie and an obvious hybrid bird. All three were brought to Perth where they were examined and photographed. Plate 9 shows clearly the intermediate plumage pattern and tail shape of the hybrid. The comparative measurements are tabulated below. The hybrid weighed $4\frac{3}{4}$ lb and had a purple iridiscence on the neck and upper breast. It was found to have rudimentary male sex organs but I. McLachlan, M.R.C.V.S., who carried out the dissection, considered it unlikely to be fertile. The crop contents of the three birds were examined and found to consist of conifer needles, green caterpillars and a few heather tips in the Capercaillie; conifer needles only in the hybrid; and heather tips with a few unidentified buds in the Blackcock. A. W. Robson identified both sets of conifer leaves as common larch—the current year's needles in the hybrid and the tufted growth of previous years in the Capercaillie.

The birds were shot in a plantation 10-20 years old in which a hen Capercaillie was first recorded two years ago. Several broods appeared in 1965 but no adult male has yet been seen.

	Capercaillie*	Hybrid	Blackcock*
Wing	375-410 mm	325 mm	252-265 mm
Tail—centre	280-325 mm	170 mm	75-100 mm
outer		30 mm longer	65-100 mm longer
Bill	32- 38 mm	22 mm	15-17.5 mm

*Measurements for males as given in *The Handbook of British Birds.*

V. M. Thom.

(Female Capercaillies usually reach new areas before males, and are then liable to pair with Blackcocks. In the former days of lavish illustrated books on gamebirds and their management such hybrids as this were frequently reported but they do not receive so much attention today.—Ed.)

Temminck's Stint in East Lothian

At 1620 hrs on 15th August 1965 while we were walking through a flock of Dunlin and Ringed Plover at Belhaven Sands a small wader with a soft twittering call, reminiscent of a Swallow, landed ahead and immediately crouched. We watched it for half an hour at ranges down to 20 yards and were able to compare it with a Little Stint. The two birds seemed to be mutually attracted.

Although generally rather similar this bird was slightly

smaller than the Little Stint and had an unmarked dark brown mantle; a pale greyish gorget ended in a straight line across the upper breast; it had a slight wing-bar, and a light eyestripe; at times—in very good light—the legs looked muddy red. The bird was obviously a Temminck's Stint.

It fed in a similar manner to, and often close beside, the Little Stint but it seemed to have a marked preference for one area of wet sand bordered by hummocks of short grass. In flight it often gave the twittering call, unlike the Little Stint, which was not heard to call at all. Both birds had the same swift grace in flight but the Temminck's would occasionally execute a series of sudden wild swerves. At times we would have a glimpse of the broad white of outer tail feathers contrasting with the dark upperparts; on the ground, a line of white at the side of the tail was often very conspicuous. Whether in flight or on the ground the Temminck's was always easily picked out from the Little by its much darker mantle.

On the 21st we were attracted again by an unusual *trrrt* call, and finally located a small wader crouched in a shallow hollow by a few small pools in an area of mud and grass near the shore. There were Dunlin and Ringed Plover feeding close by but it paid no attention except to crouch very low when they swept overhead. It was obviously the same bird we had seen a week earlier. It was now much more alert and restless and called often, but we had excellent views of it in the open and flying round and were able to make some additional notes before it rose high and went right away SSE about 1915 hrs.

Head brown with light streaks; dark line from short bill to eye; white above this almost meeting in V above bill; white from behind eye round and down under eye to throat; nape and feathers of neck grey and often fluffed up as though in a ruffle; back darker grey; wings dark brown with centre of feathers grey, appearing very dappled in some lights but almost unmarked in others; white outer tail feathers prominent in flight, each pale side of tail apparently as broad as its dark centre; streaking on breast pale grey and very pale indeed in centre of breast; legs either yellowish tinged (EMS) or flesh (RWJS).

T. Boyd, E. M. Smith, R. W. J. Smith.

(The bird was seen again in the same area on 28th August by A. Macdonald. Although Temminck's Stint attempted to breed in Scotland 30 years ago it is now rarely seen. Birds were noted in Renfrewshire in autumn 1953 and in East Lothian in the autumns of 1953 and 1954, but the only record since then seems to be of one at Fair Isle on 21st May 1964, at a time when at least eight were recorded in Britain (*Brit. Birds* 57: 339; *Bird Study* 11: 218). A bird at Paisley on the

very day that the Temminck's Stint was at Fair Isle was reported as this species. The record was not published because experienced observers to whom we showed the notes felt that the description was inconclusive, especially for a first record of the species in Scotland in spring. This decision must stand, but the surrounding circumstances are so suggestive that we have been tempted to mention it in passing.—ED.)

Pratincole in Orkney

On 6th October 1963, a fine, mainly sunny day, almost calm or light south to southeast wind, the late Herbert McKenzie observed a strange bird in company with a fairly large flock of Golden Plover on a grass field near Widewall Bay, South Ronaldsay. He described the bird to me.

In flight it resembled a dark-coloured tern, or an outsize Swallow, having long pointed wings and a deeply forked tail. Its body was clearly smaller than a plover's, but the long wings and tail gave it an elongated appearance. The main colour was dusky brown on the upperparts, shading to paler, more yellowish, brown on the breast, paler still on the lower belly, and white under the tail. There was a pale yellowish area on the chin and throat, forming a sort of bib, which was bordered all round by a thin black line. The upper tail-coverts were conspicuously white in flight and there was a dull reddish-brown patch under the wing, also seen in flight. The flight feathers and tail were blackish. The bill was short, decurved and blackish; and the legs were black and shorter than the plovers'.

The bird was very active, both on the ground and in the air, apparently chasing flies and other insects. It ran swiftly, dashing about in all directions, and frequently took flight, sweeping backwards and forwards close above the flock of feeding plovers.

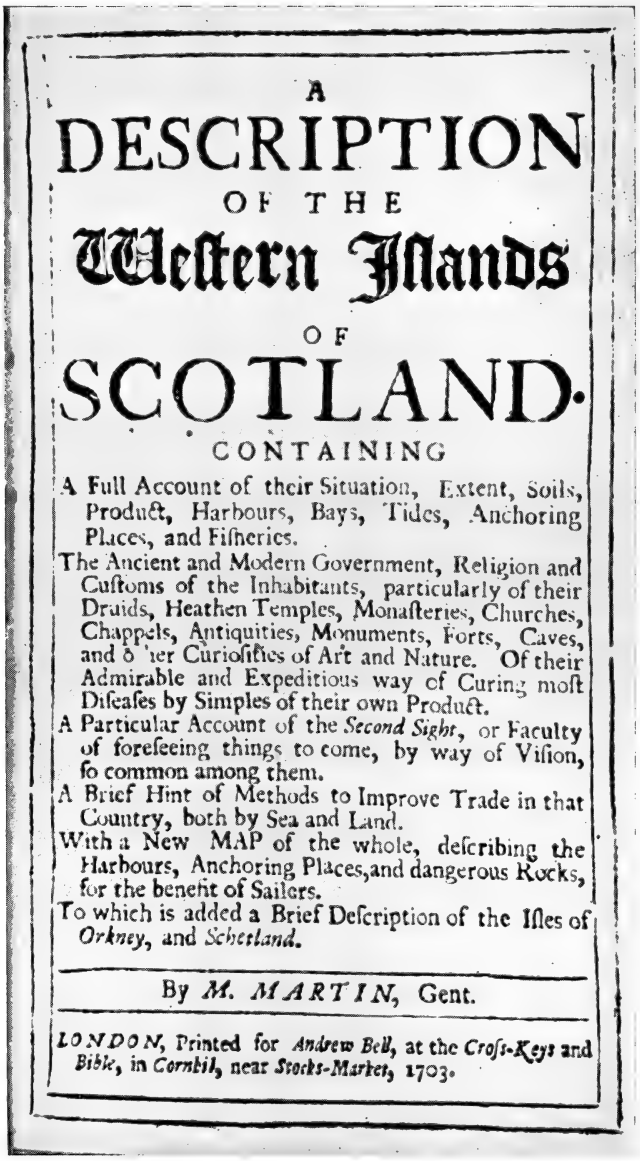
Mr McKenzie was a bit of a wildfowler in his younger days and intimately knew all the common birds. In his time he had spotted a number of rare birds, including Orkney's first Chough and Collared Dove. He watched this present bird through low-power binoculars from his car, parked beside the field where the birds were feeding. I have absolutely no doubt that the bird was a Pratincole.

E. BALFOUR.

(There are only a very few records of this species in Scotland, and in recent years there have been only sporadic occurrences in Great Britain, none of them in Scotland.—ED.)

PLATE 9. Male hybrid from Blackcock x female Capercaillie mating (*centre*) with cock Capercaillie (*top*) and Blackcock for comparison. Note the intermediate plumage and shape of the tail. The birds were shot in Perthshire on 30th September 1965 (see p. 88).

Photograph by R. A. Laing



A
DESCRIPTION
OF THE
Weſtern Iſlands
OF
SCOTLAND.
CONTAINING

A Full Account of their Situation, Extent, Soils, Product, Harbours, Bays, Tides, Anchoring Places, and Fiſheries.

The Ancient and Modern Government, Religion and Cuſtoms of the Inhabitants, particularly of their Druids, Heathen Temples, Monaſteries, Churches, Chappels, Antiquities, Monuments, Forts, Caves, and other Curioſities of Art and Nature. Of their Admirable and Expeditious way of Curing moſt Diſeaſes by Simples of their own Product.

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To which is added a Brief Deſcription of the Iſles of *Orkney*, and *Schetland*.

By *M. MARTIN*, Gent.

LONDON, Printed for *Andrew Bell*, at the *Croſs-Keys* and *Bible*, in *Cornhil*, near *Stocks-Market*, 1703.

PLATE 10. The original 1703 title page from Martin's *A Description of the Western Islands of Scotland* (see p. 64).

Photograph by I. D. Pennie

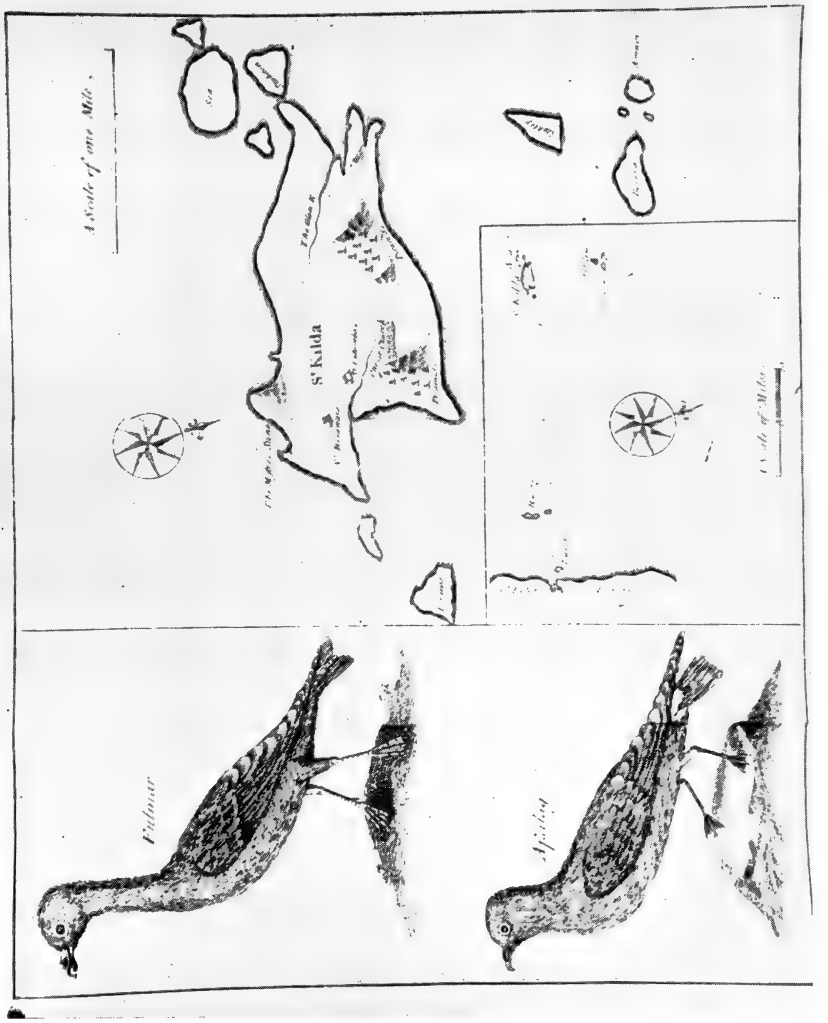

PLATE 11. Martin's map of St Kilda with the Fulmar and Storm Petrel. It was from this illustration that Sir Robert Sibbald was able to make his identification. The plate is from the 1753 edition but is essentially the same as that in the original 1698 edition.

Photograph by I D. Pennie

PLATE 12. Albino hen Blackbird brooding normal young (see p. 96).

Photograph by William S. Paton

The Green Woodpecker in Clackmannanshire

The first published report of a Green Woodpecker in Clackmannanshire on 16th April 1965 (3: 373) was of particular interest to me, as the date preceded by only four days my own first observation of the species in this county. On 20th April 1965 I first heard and then saw a Green Woodpecker in a clump of ash and oak trees on Gloom Hill, Dollar. Iain C. Munro, of Dollar, and I subsequently watched this bird on several occasions, and by 27th April it had made a (?roosting) hole about 30 ft up in the trunk of an ash tree on Gloom Hill. The bird was present throughout June but remained unmated, and after the end of June we did not see it again.

Numerous other sightings of the Green Woodpecker have been made in the county. On 29th April 1965 I learned from one of my pupils who is interested in birds that he had heard of a pair nesting at Menstrie in 1964. Confirmation of this is lacking so far, but through ICM I contacted R. Cook of Menstrie, a keen naturalist, who kindly supplied the following information:

> "Mr I. G. Scott of Tillicoultry, a shepherd, heard a Green Woodpecker calling in the summer of 1963 (day and month uncertain) in Lady Anne Wood and in another wood, both near Tillicoultry; and a year later, in April 1964 (day uncertain) he saw a Green Woodpecker in Lady Anne Wood."

On 28th April 1964 RC himself saw in Menstrie Glen a bird which he then mistook for a Golden Oriole, but which—as he realised on 3rd August 1964 when he saw and recognised a definite Green Woodpecker in Balquharn Glen—had almost certainly been a Green Woodpecker. Throughout the winter of 1964-65 RC frequently heard the species calling among the trees on Myreton Hill, at Menstrie, and in April 1965 he found a pair boring what he considered to be a possible nesting hole in an ash tree. He also heard and saw another bird calling among trees in the Silver Glen at Alva.

I myself visited Myreton Hill on 2nd May 1965, confirmed the existence of a pair there, and located an old woodpecker hole and also the new one found by RC. I was unable to climb the tree to verify nesting, but it was most interesting to hear a third woodpecker calling about $\frac{1}{4}$ mile to the west, nearer Menstrie, while I had both birds of the pair with the (?nesting) hole under observation. On 9th May I searched for and located this third bird and by its behaviour suspected it had a mate nearby, but a search for it proved unsuccessful. Later that evening I visited the Myretoun, a large house at the foot of Myreton Hill owned by a Mr Porteous, who told me that Green Woodpeckers had come to his bird table on a few rare occasions during the winters of 1963-64 and 1964-65. He had both heard and seen the birds in the vicinity in 1963 (un-

fortunately he could not give definite dates) and in 1964, but he had no knowledge of any nesting. This information was confirmed by his son, who had observed the woodpeckers on many occasions.

Suspecting then that the species was probably well established along the southern foot of the Ochils, I searched all suitable localities between Dollar and Menstrie and confirmed the presence in May 1965 of five definite pairs and a possible sixth, excluding the single bird at Dollar. I also found two more woodpecker holes, one old and one new, in ash trees (these of course could have been made by Great Spotted Woodpeckers).

Breeding, however, was not finally proved until 17th June, when Alex Weir of Cambus, a friend of ICM, telephoned and asked me to inspect a Green Woodpecker hole he had found a few days earlier in an oak tree on Wood Hill, Alva, where I had already pinpointed a pair. ICM, AW and I visited Wood Hill that evening and by means of a torch and a mirror held by a long pair of pliers, each of us verified the presence of a single newly hatched chick and two unhatched eggs at the base of the deep nesting-hole. The female woodpecker remained anxiously in the vicinity throughout the ten minutes or so that we spent at the nest.

To date, this appears to be the only actual record of breeding in Clackmannanshire, as RC was unable to confirm that his Myreton Hill pair had bred.

Summarised, the history of the Green Woodpecker in the county as presently known would appear to be: first sightings in 1963, increase in numbers in 1964, and a further increase and a spread followed by breeding in 1965. From the evidence available there seems little doubt that the species has established a firm foothold in Clackmannanshire and thus pushed its distribution a little further north in Scotland.

ALEX. TEWNION.

Nesting of a nearly white hen and a normal cock Blackbird

William S. Paton, of Kilmarnock, published a photograph in *The Countryman* (Autumn 1965, p. 73) showing an almost completely white hen Blackbird, which had some dark wing and outer tail feathers and a dark eye, sitting on her nest, and a normal cock standing beside her. In answer to a letter of inquiry he kindly wrote:

"The nest was atop a tool bag hanging from the wall of a shed in a contractor's yard off London Road, Kilmarnock. Three normal coloured young were successfully reared. A few weeks later she was incubating a second clutch of 4 eggs in a bush alongside a dwelling house, some fifty yards from the original site. Unfortunately I had to remove this nest as the building was being demolished. Not sur-

prisingly she deserted. I am told she is still occasionally seen in this area, now a petrol station nearing completion, and believe she is resident in the London Road district."

This observation supports the view that at least in the majority of cases albinism in the Blackbird is a Mendelian recessive character, like albinism in the Pheasant and in Man. Breeding experiments with Pheasants showed that the homozygous recessives were white but had an occasional coloured feather (Sage, Bryan L. 1962. *Brit. Birds* 55: 205-208) just as this almost completely white Blackbird had a few dark feathers and a dark eye. In the breeding experiments the heterozygous Pheasants were coloured but sometimes had a few white feathers, like the pied and white-marked Blackbirds fairly often reported, which show partial albinism under some conditions, such as abnormal feeding, with about three times as frequent manifestation of the partial albinism in cocks as in hens, and rarely or never in chicks or juveniles (Pickford, R. W. In press. *Biology and Human Affairs*, Spring 1966). Complete or almost complete albinism in the Blackbird is rare, but may occur as often in hens as in cocks. The existing data are not decisive on this point.

Three other records support the same view, namely: an all-white Blackbird (a hen?) which had normal young (Jeffrey, R. A. 1963. *Scot. Birds* 2: 447); an all-white cock and a normal hen which had five normal young (Rollin, N. 1964. Non-hereditary and hereditary abnormal plumage. *Bird Research* 2: 32); and a pair of all-white birds which are said to have had white offspring (Morris, F. C. 1903. *A History of British Birds* 3rd Ed: 85-87). In the last case all the offspring would be homozygous recessives and would be expected to be completely or almost completely white. In the other cases the young would be heterozygotes and would be expected to be normal in colouring, as reported.

The illustration, plate 12, published with Mr Paton's kind permission, shows the nearly white hen sitting on her nest, with the beaks of the three young protruding.

R. W. Pickford.

Abnormally plumaged Willow Warblers

An abnormal Willow Warbler was seen by R. C. Meekin, D. Boomer and myself on 25th July 1965 at Bardowie Loch, Stirlingshire, in an area of bushy vegetation and hedges. It associated with other Willow Warblers and a few Whitethroats. It flitted actively amongst the branches, hovering occasionally, and was chased once by an adult Willow Warbler. It was a juvenile as shown by the very fresh state of the primaries and secondaries, and it was not heard calling.

The following description is based on notes made at the time:

Chin, throat and breast bright lemon yellow, much like a Wood Warbler or young Willow Warbler; belly whitish; head, neck, back, scapulars, and wing coverts bright canary yellow, so bright that the superciliary was barely visible; rump slightly paler than back; outer primaries slightly darker than back; inner primaries, secondaries, and whole of tail cream, paler than back and contrasting with it, this being very apparent in flight (especially the tail); paler colouring on wings completely symmetrical; the overall paleness of the bird made it look slightly larger than a Willow Warbler in flight; bill dark like other Willow Warblers, but legs and feet much brighter buffish yellow than normal; eyes normally coloured.

We concluded that this abnormal yellowness of the plumage was due to xanthism, a condition found mainly in birds with greenish plumage and caused by excessive retention of yellow pigment and loss of dark ones. As far as I know, the only previous record of this condition in leaf-warblers was in a pair of Wood Warblers in Wales in 1954 (*Brit. Birds* 55, pls. 44, 45).

W. M. M. Eddie.

Mr Eddie's note prompted us to report a Willow Warbler with several striking aberrations of plumage which we saw at Fair Isle on 4th September 1958 during a fall of migrants. The following field notes were taken by PJS shortly after he found the bird:

Bright pale lemon head; fleck of lemon on nape; dark olive back, with pinkish lemon primaries; lower back darker olive than upper; pale grey-buff below, shading to ashy white on chest; pinkish legs; bill very pale straw; no wing-bars in flight; indulging in flycatcher-like forays for insects.

Apart from its curious plumage the bird resembled in every way a normal Willow Warbler, with several of which it was associating. It was first seen at Easter Lother in the north of the island but was observed near the south lighthouse on subsequent days.

P. J. Sellar, P. J. B. Slater.

(A yellow and white Willow Warbler was captured at Selkirk on 9th July 1954 (*Edinburgh Bird Bulletin* 5: 15); it was different from either of the birds described above. We sent these two notes to Bryan L. Sage, who has made a special study of plumage abnormalities, and he commented that the Stirlingshire bird was evidently "an example of schizochroism, in which the melanin pigment is absent from the plumage, but the carotenoid pigment remains, thus resulting in a predominantly yellow individual. This must be quite a rare condition in this species as the only other record of which I am aware is the Selkirk bird." He has not come across any-

thing like the Fair Isle bird "but it would seem to be a case of partial absence of melanin pigment in certain parts of the plumage (mainly the primaries and head) and in the bill and legs. It is a pity that the iris colour was not noted. I imagine that the pinkish colour apparently seen in the primaries was an effect of light."—ED.)

Firecrest in Shetland

On the evening of 11th June 1965 DC found a male Firecrest in a plantation at Seafield, Lerwick. He told WGP, who saw it next morning. Subsequently both of us watched it at close range on various dates until 3rd July and it was seen also by R. H. Dennis, R. J. Tulloch and others. The plantation was checked every day and we thought the bird had gone, but it reappeared, showing traces of moult, on 29th August. Just before it disappeared, presumably to moult, and again when it reappeared eight weeks later, it called less than at other times, making it more difficult to find. It remained until 27th September, by which time it was in good plumage. There were numbers of Goldcrests in the plantation at this time and it may have left with them.

In general shape, size and behaviour the bird resembled a Goldcrest, though in flight it first looked like a small warbler. When discovered it seemed rather tired and ruffled, but on later occasions it was very active and could often be heard and seen feeding from as low as four feet among dead firs to as high as the leaf canopy of the 30-ft sycamores.

The brilliant orange-red crest (looking too wide and red for a Goldcrest) was most striking, with the black border above the very distinct white supercillium. Once when viewed from directly in front these bands of colour and the dark stripes through the eye and on the cheeks created a most eye-catching effect as they all seemed to radiate from the bill.

We paid particular attention to the call, which resembled a Goldcrest's but was easier to detect because of its lower pitch, though tending to rise towards the end of a string of about nine notes. The bird called less persistently than a Goldcrest and the tone was somewhat harsher. Once it was observed that the bill opened wider as the call progressed.

The following description is compiled from our notes:

Similar to Goldcrest (including wing pattern at rest) with general colour, if anything, slightly greener, especially on rump; orange-red crest with greater brilliance showing at base of feathers (almost luminous with sun shining on it); very distinct white supercillium divided from crest by black border; pale patch under eye bordered by dark line through eye and by moustachial stripe; sides of neck tinged golden bronze; underparts whitish; back olive-green; wings brownish.

DENNIS COUTTS, WILLIAM G. PORTEOUS.

(This record has been submitted to and accepted by the *British Birds* Rarities Committee, as the species was included (for Scotland only) in the list of species with which the committee is concerned (*Brit. Birds* 57: 281). We have been told that it was meant to delete it from the list and therefore the record does not appear in the 1965 report (see *Brit. Birds* 58: 354). This is the third Firecrest recorded in Scotland. The others were on the Isle of May from 30th September to 3rd October 1959 and on 22nd September 1960 (*Scot. Birds* 1: 153, 357).—Ed.)

Scandinavian Rock Pipits in Scotland in spring

A pale pipit was noticed on the sea wall above the Bruce Embankment in St Andrews, Fife, on 14th March 1965. It was keeping close company with a Rock Pipit and feeding on flies from the rotting seaweed. It had most of the same postural characteristics as the Rock Pipit, being particularly inclined to stand very upright, and it chased the flies in a wagtail-like fashion, darting after them. It appeared pale buff-grey in flight and had dark legs. It seemed very slightly larger than the Rock Pipit, with which it was compared constantly. It was present all afternoon and was viewed down to 20 feet with 6 x 30 binoculars in good light. Several attempts were made to trap it but it avoided the net. The following features were noted:

> Eyestripe off-white and very distinct even without binoculars, especially when compared with Rock Pipit;head, back and rump grey-brown, very different from dark olive-brown of Rock Pipit; outer tail feathers off-white, but appeared white in flight; tips of primary and secondary coverts markedly white-buff and distinct; throat and breast very pale buff shading to off-white under chin, being neatly marked with dark brown spots, slightly oblong and very much sparser than on Rock Pipit and tending to form faint collar under chin; belly pale buff and not noticeably streaked. Call slightly more drawn out and not quite so harsh and vibrant as the Rock Pipit's.

These notes were shown to K. Williamson, who has made a special study of Rock Pipits, and he commented that they fit very well the Baltic (or Scandinavian) race of Rock Pipit *Anthus spinoletta littoralis*—a specimen which has undergone more than the usual amount of spring moult for this date. Such birds are rather similar to Water Pipits.

J. L. S. Cobb.

On 27th May 1965 I saw a Scandinavian Rock Pipit *A. s. littoralis* on the Isle of May. It flew onto a wall beside a local Rock Pipit and the contrast was immediate and apparent. I also saw it chivvied off three territories, which indicates it was a stranger. It seemed a little larger than the local

birds, and not only because it was paler and had its feathers fluffed out; but it was exactly the same shape, notably in the bill. The pattern on head and upperparts was the same, but the colour completely different, a kind of yellowish brown instead of greeny slate. Below, it was almost unstreaked, though there was a ring of faint streaks across the breast and more on the flanks. It completely lacked the heavy black appearance of the usual Rock Pipit's streaks. In addition there was a rosy tinge over the whole breast (which might well be lost in a museum skin). Altogether it was a most distinctive bird at that time of year.

M. F. M. Meiklejohn.

(Races of the Rock Pipit *Anthus spinoletta* are similar in winter plumage but distinctive in nuptial plumage. There are only a few published records of the Scandinavian race in Scotland although it is strongly migratory, many wintering in north and west France. It may well prove to be a regular spring migrant in very small numbers on the east coast. For a full discussion of the races and their distribution see K. Williamson, 'Moult and its relation to taxonomy in Rock and Water Pipits', *Brit. Birds* 58: 493-504.

In the light of these researches it seems likely that the 'Water Pipit' in Shetland on 8th and 9th May 1950 (*Birds and Mammals of Shetland*: 138) which the Scottish Bird Records Committee square-bracketted because the race was not determined (*Scot. Nat.* 1957: 42) was a well moulted example of the Scandinavian Rock Pipit *A. s. littoralis*.—Ed.)

Woodchat Shrikes in Fife and East Lothian

About 10.30 a.m. on 30th May 1965 R. B. Hughes found a Woodchat Shrike on the south bank of Kilconquhar Loch. I returned to the area with him and we made a detailed description of the bird:

Slightly larger than a House Sparrow, but with a noticeably long tail and typical shrike stance on its perch. Throat and underparts fawn, perhaps slightly lighter than a female Chaffinch; chestnut crown and nape, with bold blackish band through eye continuing across forehead; black or dark brown back, mantle and tail, with white outer tail feathers: large oval scapular patch and small patch on edge of closed wing very much the same colour as underparts (showing in flight as an oval patch and small wing-bar); very conspicous large area of white on rump; a few light bars just discernible at close range on body just below closed wing; slightly hooked black bill; legs and feet black.

The bird haunted a small plantation of 3 ft pines, perching on the tops of the trees. Its flight was undulating over short distances but more direct on the occasional longer flight. It flew in low, ending with an upward sweep onto its perch. Its tail was constantly flicked in a curious fashion, from one side

to the other as well as up and down, almost describing a semi-circle. When hunting it would view from the perch, but always took its prey from the ground in a dashing swoop, quickly returning to its perch again. Twice the prey was bumble bees, but a small worm or caterpillar was also taken. Though basically a very silent bird we heard it once utter a harsh *chatt*.

It was quite trusting and excellent views were obtained. We returned in the afternoon with Dr W. J. Eggeling and saw it again, and at 1900 hrs when we found it sitting on a high-ish branch of a sycamore as if settling to roost, where we left it. Despite a thorough search it could not be found on the 31st.

DAVID W. OLIVER.

(The only previous record for South Fife is of a rather sketchily described bird near Kinghorn on 21st and 22nd May 1953 (*Edinburgh Bird Bulletin* 3: 69, 72).—ED.)

At Barns Ness on 4th September 1965, following a day and night of heavy rain and strong east winds which succeeded the clear anticyclonic weather of the 2nd, I found there had been a fall of passerine migrants, including a female Pied Flycatcher, Garden Warblers, Redstarts, Whitethroats, one Lesser Whitethroat and, with them in the old quarry, a female Woodchat Shrike.

The most noticeable feature was the chestnut crown and nape above the dark brown eyestripe, which crossed the forehead and passed behind the eyes to merge with the dark brown back and wings, of which latter only the scapulars were seen to be dirty white at rest. The whole underside was a dirty white, and in flight the rump and outer tail feathers were the same shade. The eye was black, and the hooked bill was dark at the tip, shading to a dirty pink at the base. When it opened its bill, prior to disgorging a pellet, the inside of the mouth was seen to be pale pink. The legs were black but not normally visible while it perched. During the occasional short fast flights I noted the white on the scapulars and rump, but the patch on the primaries escaped me.

I was quite sure that it was a Woodchat Shrike, and a female from the dullness of the colours, the chestnut not being as red as in males nor the white clean enough, and the black parts being a dull sooty brown. There was no barring as in immatures.

The bird selected prominent perches, at the top of the bare branches of the elder bushes or on the bundles of barbed wire, from which it kept a lookout for passing insects. It sat hunched up on its perch, and it was during one of these longer quiet spells that it suddenly yawned and stretched up to its full height and disgorged the pellet ($\frac{1}{4}$" x $\frac{3}{4}$") of indigestible insect fragments, mostly the hard horny black parts of thorax, head and legs of insects. After this it became much

more active, and chased and knocked to the ground a large bumble bee and, securing it on the ground, returned with it to its perch on the barbed wire, there to chew it sufficiently to make it soft enough to swallow whole. There was no hammering of the bee on the wire, only a steady chewing in the bill, once only holding it in its right foot to change the grip in the mouth, and then more chewing and the final swallow—perhaps 30 seconds in all. No prey was hung on the barbs: all was eaten as it was caught. It seems that a 'siesta' is needed between each bumble bee for digestion, as it resumed its hunched position for some time after the bee was swallowed; then it would revive and start watching for another one to appear. It would allow approach to about 15 yards and then move to the next perch.

Mrs Susan Beasley of the Department of Zoology, University of Edinburgh, kindly identified the contents of the pellet as parts of four bees (Apidae), one carabid beetle, and probably the remains of a parasitic insect.

The bird was caught on the 5th by A. T. and E. H. L. Macmillan and identified as an unmoulted female in very scruffy abraded plumage. Detailed notes were made of its plumage, including the white patch across the primaries. It remained in the area and was seen by M. J. Everett, R. W. J. Smith, G. and M. I. Waterston and others, being last noted by P. J. B. Slater on the 15th. This is the first record for East Lothian.

ALASTAIR MACDONALD.

Black-headed Bunting in Shetland

On 4th June 1965 I heard from John H. Simpson that he had finally managed to see a bird which had been reported several times during the previous week in the Brough district of Whalsay. He had watched it in bright light for some time as it fed on a field of short grass, and had concluded that it was a male Black-headed Bunting.

After searching the area together for over two hours on the morning of the 5th we were rewarded by the bird flying towards us and perching on low power cables about 30 yards from us. It remained there, fairly still, for about half a minute, before flying over the fields to another power cable and then out of sight behind some houses.

The flight was undulating and reminded me of a Snow Bunting, to which it seemed similar in size, though perhaps slightly less robust. It called several times in flight—a short, slightly rising, fairly low-pitched *whst*, repeated at about 3-4 second intervals.

At rest the most noticeable feature was the rather large, very pale leaden-blue bill, contrasting sharply with the black front and sides of the head, and with the canary-yellow belly, breast and throat, which extended right up to the bill and gave the bird, when the head was turned towards us, an almost Peregrine-like moustached appearance. The wings and tail were brown, pale edges to the coverts showing as a double wing-bar on the closed wing, and pale outer webs of primaries and secondaries also being noticeable. No white showed in the tail but it was not clearly seen and the outer feathers could have been a little paler than the rest. The back was a richer brown than the wing and showed some streaking, but in the dull misty conditions we could not make out the more russet colour which JHS had previously noted, nor a brownish sheen which had showed at times on the head. The black of the crown seemed to merge into the brown of the back on the nape. The legs were pale brown, and the eye, not clearly seen, appeared to be dark.

On looking at illustrations later we agreed that the bird was exactly like the male shown in the *Field Guide*, except that the bill was much paler and more like the *Handbook* illustration.

People living nearby told us that the bird was rather shy, and that, when disturbed, usually flew away fairly high for a considerable distance, although once it was seen on a lawn in front of a house with some House Sparrows.

We were left in no doubt that the bird was a male Black-headed Bunting. Apart from Fair Isle records this is the first to be recorded in Shetland. It is interesting to note that a male Red-headed Bunting was in the Tingwall area for approximately the same period.

ROBERT J. TULLOCH.

(This record has been accepted by the Rarities Committee of *British Birds*, but the committee consider that the bird was most probably an escape, particularly as it occurred at the same time as a Red-headed Bunting—a frequent fugitive. We understand that the same combination of Black-headed and Red-headed Buntings occurred about this time at Fair Isle.—ED.)

Rustic Bunting in Outer Hebrides

A Rustic Bunting was observed at Askernish House, South Uist, from 9.30 to 10.30 a.m. on 7th May 1965 by W. J. Eggeling, D. Lea, D. S. Ranwell, G. Waterston and M. I. Waterston. It

was first seen perched on a wire fence, the unusual head pattern immediately attracting attention. From the fence it flew into a patch of irises where it fed on the ground between the clumps. When flushed it flew to the garden wall and was watched by all five observers as it perched there and later in a small bush by the house. Eventually it flew off and was lost in a marshy field.

The crown and cheeks were black or brown-black, the colour extending down the nape. The throat was white tinged with cream and there was a broad white stripe running back from the eye to above the nape. In certain positions this stripe appeared tinged cream or buff. A streaky warm brown chest band merged irregularly with the almost pure white underparts. The upperparts were chestnut streaked with black, the chestnut extending to the upper tail-coverts. When it was perched the raising of the crest referred to in the *Field Guide* was noticed by several members of the party.

Flying with Reed Buntings the bird seemed noticeably shorter to DL and gave the impression of being stockier. WJE did not consider it appreciably shorter than a Reed Bunting when seen alone but noted it as slightly smaller in flight with them. GW recorded its posture at rest as not so erect as a Reed Bunting's and thought the mantle not so boldly streaked as that of accompanying cock Reed Buntings. WJE noted the bird as more chestnut than the latter, probably because of the less obvious black back streaks, and considered the head pattern not so strikingly black and white as one would expect in a cock Rustic Bunting in summer plumage. Because the white stripe behind the eye and the white throat both showed traces of cream or brown it was suggested that the bird had not completed its spring moult.

When it was in the bush the bird was seen by WJE to creep through it slowly like a mouse—in the manner of a Lapland Bunting on the ground—something he has never seen a Reed Bunting do. No call note was recorded.

Askernish House lies on the edge of the machair on the west coast of South Uist some four miles south of Ardvale Point. It is situated in an area of rough damp fields with *Juncus*, *Iris* and some *Phragmites* in the ditches. The weather on 6th May was cold with strong SE wind and low cloud, and on the morning of the 7th the wind was still SE and quite strong. This is the first occurrence of the species in the Outer Hebrides.

W. J. Eggeling.

Current Notes

Compiled by P. J. B. SLATER

(Key to initials of observers : D. G. Andrew, J. M. S. Arnott, W. Austin, R. S. Baillie, J. Ballantyne, H. Boase (HBs), D. Boomer, H. Boyd (HBd), T. Boyd, Mrs A. Buchanan, Caithness Group per D. M. Stark (Caith Gp), Miss K. M. Calver, Dr J. W. Campbell, S. J. Clarke, F. Colman, M. Coyne, H. G. Cree, R. Dalrymple, P. E. Davis, R. H. Dennis, D. Dewar, G. Dick, R. A. Dickson, R. C. Dickson, J. Dunbar, J. N. Dymond, W. M. M. Eddie, J. Edelsten, Dr W. J. Eggeling, M. J. Everett, R. W. Forrester, I. Gibson, P. Grubb, A. Halliday, P. B. Heppleston, D. C. Hulme, W. Hutton, E. N. Hunter, R. Job, P. Johnson, M. Jones, T. S. Kelly, Miss H. Knight, D. Lea, A. F. Leitch, J. Lister, D. G. Long, J. A. Love, A. Macdonald, D. Macdonald, D. W. R. Macdonald, E. Macdonald, M. A. Macdonald, B. McDowall, J. MacEachern (JMcE), Mrs M. MacEachern, Miss J. McFarlane (JMcF), J. MacGeogh (JMcG), K. S. Macgregor, K. Mackenzie, Dr P. McMorran, R. Meekin (RMn), Prof. M. F. M. Meiklejohn, J. K. R. Melrose, D. G. Middleton, Lt. Cdr. R. H. Miller, F. M. Moore, Miss H. Morley, W. M. Morrison, Cdr. R. Muir (RMr), I. C. Munro, D. J. Norden, M. A. Ogilvie, D. W. Oliver, J. S. Oliver, C. E. Palmar, R. K. Pollock, J. Potter, R. M. Ramage, A. D. K. Ramsay, C. P. Rawcliffe (CPRf), G. A. Richards, R. Richardson, E. L. Roberts, Lt. Cdr. C. P. Ross (CPRs), Dr M. Rusk, W. K. Russell, P. W. Sandeman, I. H. Simpson, P. J. B. Slater, A. J. Smith, Mrs E. M. Smith, R. W. J. Smith, Dr T. C. Smout, D. Stewart, N. L. Storie, J. Swan, R. L. Swann, C. Tait, I. Taylor, Miss V. M. Thom, B. R. Thomson, R. B. Tozer, Dr B. C. Tulloch, R. J. Tulloch, G. Waterston, A. D. Watson, J. Watt, J. R. Weir, T. Weir, W. H. Wild, P. C. Williams, J. F. Wilson, M. G. Wilson, N. Wright, J. G. Young.

All dates refer to 1965.)

Distribution

Records from before 1st September 1965 are not included in this section except where they are relevant to more recent topics.

A **Great Northern Diver**, initially in almost full breeding plumage but later showing signs of moult, was at Earlston Loch near Dalry, Kirkcudbrightshire, from 5th to 19th November (JKRM, JS, ADW). In recent years **Red-necked Grebe** records from the Forth seem to have become more numerous: one at least was present at Gullane, East Lothian, on 17th October (MGW), and there were two there on 23rd (MAM, RLS, CT). A **Slavonian Grebe** was inland at Gladhouse, Midlothian, on 10th October (RWJS). There being few records of **Little Grebes** at Aberlady, East Lothian, it is worth recording that one was seen on the Marl Loch there on 19th September (RAD, RCD).

On 11th December about 6500 **Mallard** were seen at Strathbeg, Aberdeenshire (JE), and 1500 were counted at the Al-

mond Estuary, West Lothian, on the same day; the numbers there in autumn have increased steadily over the last few years and this is the maximum ever recorded (TCS). There are few places in Scotland where **Gadwall** occur regularly and the following reports are therefore of interest: a pair at Loch Ken, Kirkcudbrightshire, on 17th October (RBT); a male on a small pond at Currie, Midlothian, on 2nd November (CPRf); a pair at Stormont Loch, Blairgowrie, Perthshire, on 7th November (VMT); two pairs on Glenbuck reservoir, Ayrshire, on 11th November (GAR); two males at Linlithgow Loch, West Lothian, on 27th November (JAL); and four birds at Garlieston, Wigtownshire, on 9th December (RHM).

Two **Pintail** were seen at Doonfoot on 6th October (JND) and seven at Barassie, Ayrshire, on 8th October (GAR); two drakes and a duck were at the Almond Estuary on 11th December (TCS); there was a duck at Aberlady, East Lothian, on 6th November (RLS); and two drakes at Stormont Loch on 7th (VMT). Although **Scaup** are not infrequent inland, single females near Port Henderson, Wester Ross, from 9th to 11th October (ENH), and at Gartmorn Dam, Clackmannanshire, on 30th October (ICM, RMR) are worth mentioning, being further from the usual winter concentrations of this species than other records. Another species which has shown an increase at the Almond Estuary in the last five years is the **Goldeneye**—116 were seen there on 11th December (TCS). Only one record of **Long-tailed Duck** inland has come to light: that of an adult male at Lindores Loch, Fife, between 25th October and 10th November (JW), in the same place and at the same time as one was seen last year (3: 261).

A male **Goosander** was at Glencorse Reservoir, Midlothian, on 13th November (RLS), and a female was seen at Duddingston Loch, Edinburgh, on 20th and 27th November and on 23rd December (PJ, AFL, RLS). There were 242 on the Beauly Firth, Inverness-shire, on 12th December (WMM, MR); substantially bigger numbers have sometimes been counted there in winter (2: 313; 3: 319).

All the **Smew** seen recently have been 'red-heads', and some of these have been seen in small concentrations:

Strathbeg, Aberdeen—1 on 11th Dec (JE).
Endrick mouth, Stirling/Dunbarton—2 on 21st and 1 on 26th Nov (HGC, JND, RWF).
Castle Semple Loch, Renfrew—4 on 14th Nov (WHW), 2 on 12th Dec (MJE).
Rowbank Reservoir, Renfrew—1 on 12th Dec (MJE).
Roseberry Reservoir, Midlothian—7 on 14th and 21st Nov; 3 on 26th Dec (DGA, EMS, RWJS).

The report of a **Shelduck** seen flying off Drummond Pond, Crieff, Perthshire, on 7th November is unusual as being so far inland (MAO per VMT).

The earliest report of **Grey Lag Geese** is of about 25 at Abernethy, Perthshire, on 11th September, the date suggesting that they were Scottish breeding birds (WH per JW). Otherwise the first records were of 38 going south over the Lake of Menteith, Perthshire, on 30th September (RCD), and a skein of 30 at Endrick mouth on 3rd October (IG). Although the main arrival did not occur until the first few days of November, the annual count on 7th showed an increase to 45,000 in Scotland (see 3: 262), suggesting that the wintering population was pretty well complete by then (per HBd).

The first Greenland **White-fronted Geese** to arrive at Loch Ken, Kirkcudbrightshire, did so on 30th October and full numbers were present by 9th November (ADW). These dates seem to tie in with the observation of a skein of about 20 flying south at Sanna Bay, Ardnamurchan, Argyllshire, on 29th October (JMcE, MM, DS), and of 9 present on Fair Isle, Shetland, from 28th to 31st October (RHD). Two adult Greenland birds were outwith their normal wintering areas at Tibbermore, Perthshire, on 18th December (VMT).

The first **Bean Geese** to arrive in Kirkcudbrightshire were eight seen near Castle Douglas on 26th December (ADW, JGY), but earlier reports from elsewhere are of nine at Newburgh, Aberdeenshire, on 12th November (MFMM), and one with Pinkfeet at Endrick mouth on 5th December (DB, WMME, RMn). The earliest **Pink-footed Geese** seen were 25 going west at East Calder, Midlothian, on 10th September (DD). At Caerlaverock, Dumfriesshire, there were 18 on 11th, 75 on 18th and 300-500 by 30th September (ELR). A skein of 31 was seen at Moonzie, near Cupar, Fife, on 13th September (DWO). Large-scale arrivals are reported from Perthshire between 1st and 3rd October (VMT), and on the latter date there was a steady passage of skeins going southwest in Glen Lyon (TW). While the main passage seems to have been in late September and early October some birds arrived rather later: 52,000 were estimated to be present in Scotland on 17th October but this had increased to 59,000 by 7th November, according to the annual goose count. This national figure is again slightly up on that of last year (3: 262), but the most striking increase has been in Aberdeenshire, where numbers have increased steadily from just over 1,000 in 1962 to this year's record total of over 11,500 (per HBd).

Odd **Snow Geese** have been seen again this year: in October there were three, thought not to be Ross's, at Carsebreck, Perthshire, on 16th (JRW); one was at Loch Strathbeg, Aber-

deenshire, on 17th (JE); and a small bird, possibly a Ross's, was at Flander's Moss, Stirlingshire, on 24th (JMSA, MFMM). A blue-phase **Lesser Snow Goose** was seen at Windyedge, Perthshire, on 8th November (VMT). Also in Perthshire, a Pale-bellied **Brent Goose** was seen at Methven Moss on 3rd October (VMT), and two were at Dupplin Loch on 17th (JRW). Another was seen at Tyninghame, East Lothian, on 21st November (CT), and there were five, Dark-bellied birds this time, at Newburgh, Aberdeenshire, on 14th (MFMM).

Two **Barnacle Geese** were present at Caerlaverock on 27th September, with 13 on 29th and at least 2000 by 6th October (ELR). Some were apparently still travelling south at the end of October as skeins totalling about 500 birds were seen at Sanna Bay, Ardnamurchan, on 29th and 30th (JMcE, MM, DS). The following are records of Barnacles away from their normal wintering grounds, but excluding those of smaller parties in Perthshire which are too numerous to detail:

Fair Isle—odd birds from 5th Oct to 21st Nov, with maxima of 10 on 5th and 8 on 30th Oct (RHD).
Dornoch, Sutherland—1 on 30th Oct (DM).
Ythan Estuary, Aberdeen—5 on 15th Nov (MFMM).
Carsebreck, Perth—13 on 24th Oct (VMT).
Windyedge, Perth—19 on 8th Nov (VMT).
Kinkell Bridge, Perth—7 on 27th Nov (VMT).
Carnbee Reservoir, Fife—1 in last week of Nov (per DWO).
Gartocharn, Dunbarton—2 with Greylag on 6th Nov (TW).
Skinflats, East Stirling—7 on 9th Oct; 4 on 30th; 3 on 31st; 2 on 7th Nov (GD, JP, IT).
Threipmuir, Midlothian—1 on 27th Nov (CT).

The earliest **Whooper Swans** reported were on 26th September when there was one at Longman Bay, Inverness (JAL, WMM), and six were seen at Gadloch, Lanarkshire (FC). Passage was noted at Fair Isle from 16th October to 20th November—the largest number seen was 39 on 28th October (RHD). On 30th October herds were seen passing Sanna Bay, Ardnamurchan—a total of 64 birds (JMcE, MM, DS). Eight adults and an immature were seen at Tyninghame, where this species is unusual, on 7th November (MFMM). **Bewick's Swans** have also been reported from Tyninghame where there were two on 21st November and four on 19th December (CT). Family parties, each of two adults and three immatures, were at Strathbeg on 11th December (JE), and at Branahuie Loch, Lewis, on 15th (GAR). A further record is of one which spent half an hour at Kilconquhar Loch, Fife, on 26th December (DWO).

Single sightings of our resident birds of prey during the winter are unfortunately of little use in assessing their diminished status because of their tendency to wander extensively. But it may perhaps be worth noting that more

reports of **Buzzards** and **Sparrowhawks** than usual have been received during the last quarter indicating, one hopes, an increase. A **Rough-legged Buzzard** was watched at close quarters both hovering and perching on Black Hill in the Pentlands, Midlothian, on 12th December (ADKR). An **Osprey** was present on Fair Isle on 3rd October (RHD), and a female **Peregrine** was seen being mobbed by Crows near Fife Ness on 23rd October (DWO).

An interesting occurrence is that of a female **Capercaillie** in Inverness between 14th November and 14th December. It was seen by a number of people in various gardens in the town and it allowed a close approach before flying off. (MR).

While probably not uncommon, **Water Rails** are seldom seen—two at Yetholm, Roxburghshire, on 27th November were the first there in the observer's experience (RSB). On 25th December 26 **Moorhens** were counted at the Peffer Burn, Aberlady, this being a high number for this area in winter (RSB).

The biggest number of **Golden Plover** for a number of years were seen in the Moorfoot area, Midlothian, during the autumn, with up to 575 being counted together (DGA, EMS, RWJS). Three flocks along 5 miles of the Ayr bypass on 2nd October totalled nearly 2800 birds (JND). Two were noted at the Figgate Pond in Edinburgh on 27th November (PJ, AFL). **Jack Snipe** seen in Fife have been 12 at Largo Bay on 14th November (DWO), and one at the Eden Estuary, an area for which there are few recent records, on 4th December (DJN, DWO). The highest count at Paisley Moss, Renfrewshire, was of six on 5th October (IG).

The following are reports of **Black-tailed Godwits** additional to those given previously (3: 424):

Montrose Basin, Angus—1 on 7th Nov (JD).
Kilchattan Bay, Bute—1 on 25th and 26th Nov (DGM).
Largo Bay, Fife—20 on 27th Nov, probably birds moving from the Eden Estuary (DWO).
Skinflats—2 on 3rd Oct (IT).
Near Kilwinning, Ayr—1 on 8th Oct (GAR).

A **Green Sandpiper** at Knowesdean Reservoir (NT 437395) on 15th and 17th September seems to be only the second recorded in Selkirkshire (JB).

Further **Wood Sandpiper** records are all from the Forth area with two at Rosyth, Fife, on 19th September (HM, BRT); one at Aberlady on 2nd October (JSO); and one at Skinflats on 3rd (IT). The latest **Common Sandpiper** to be reported was one still at Montrose Basin on 24th October (JD).

A **Redshank** with very dark black-brown on the wing coverts was found dead at Prestwick, Ayrshire, on 16th October; it had a particularly long wing (170 mm) and can therefore be safely attributed to the Iceland race (GAR). A count of 600 Redshanks on the Almond Estuary on 11th December was unprecedented for the time of year—the birds were apparently attracted by food associated with piles of seaweed thrown onto the beech in stormy weather (TCS).

A number of late autumn records of **Spotted Redshanks** have come to light:

Montrose Basin—1 on 24th Oct (JD).
Anstruther, Fife—1 heard on night of 2nd Oct (MFMM).
Skinflats—1 on 2nd; 2 on 3rd and 1 on 30th Oct (IT).
Aberlady—1 on 16th Oct (RSB).
West Barns pools, East Lothian—1 from mid Oct to 14th Nov (TB, EMS, RWJS), probably the same as 1 at Belhaven on 17th Oct (MFMM).
Near Kilwinning, Ayr—1 from 8th Oct to 8th Nov (GAR).

There are several more reports of **Little Stints** to add to the already impressive list for last autumn (3: 426):

Fair Isle—1 on 2nd Oct (RHD).
Montrose Basin—2 on 11th Oct (JD).
Fife Ness—1 on 3rd Oct (DWO).
Skinflats—4 on 3rd Oct; 1 on 30th Oct (IT).
Aberlady—2 on 12th Oct (AFL, DWRM, MAM, RLS, PCW).
Tyninghame—10 on 29th Sept; at least 7 on 2nd Oct; 1 on 30th Oct (TB, ADKR, EMS, RWJS).
Doonfoot, Ayr—1 on 29th Sept (GAR), and 6th Oct (JND).

A first-winter male **Temminck's Stint**, which was unfortunately subsequently shot, was present with another bird, possibly of the same species, at Islesteps, Dumfries, from about 10th November to 16th. It has since been prepared as a skin (WMME, DJN, CEP).

Further sightings of **Curlew Sandpipers** are as follows:

Invergowrie Bay, Perth—1 on 14th Oct (HBs).
Eden Estuary—2 with Dunlin on 2nd Oct (RJ).
Skinflats—8 on 9th; 2 on 10th; and 1 on 24th Oct (IT).
Tyninghame—1 on 26th Sept (TB, EMS, RWJS).
Caerlaverock—1 on 3rd Oct (ELR).

Although **Ruff** records for last autumn have proved too numerous to give in detail, it is worth noting that numbers at Caerlaverock increased steadily from three on 14th August to hundreds by 3rd October (ELR).

The first definite occurrence of a **Pomarine Skua** at Tyninghame was of an immature, which allowed approach to within about fifty yards, on 26th September (EMS, RWJS).

An adult **Lesser Black-backed Gull** of the Scandinavian race was seen on the Water of Leith in Leith, Midlothian, on 8th

November (CPRf). **Glaucous Gulls** in less usual areas have been one at Machrie Bay, Islay, on 6th October (RKP), and a first-winter bird on the Beauly Firth on 30th December (RHD). Excluding the controversial 'white gull' (see 3: 371), which was back on the *Carrick* in Glasgow by 3rd September (NLS), there are three reports of **Iceland Gulls**. An immature was at Gairloch, Wester Ross, on 26th September (TW); and single adults were seen at Carlingheugh Bay, Angus, on 12th December (RJ), and at Seafield, Midlothian, on 11th December (MJE, ADKR).

The last **Little Gull** to leave Kilconquhar Loch was still there on 9th October but 20 were still in Fife at Elie Ness on 7th November (DWO). In Angus there were over 20 at Monifieth on 3rd October (JD); 23 adults and 28 immatures at Carnoustie on 16th October (RJ); and at least 20 birds still in the same area on 12th December (JD). A juvenile **Kittiwake**, which was found dead at Summerston, Glasgow, on 30th October, had strayed a good bit from the sea (WKR).

A very good count of **Black Terns** is of 16 which were hawking flies along the edge of the sea marsh near Skinflats on 26th September (JP, IT). An immature was found dead at Mertoun, Roxburghshire, on 4th September (AJS). The latest record of **Common Tern** is of two seen in flight at Seafield on 30th October (JAL). The **Black Guillemot** is unusual in the Clyde: one was seen there at Hunterston, Ayrshire, on 10th October (RD, IG, EM).

There are two reports of **Hoopoes**, the first being seen in sand dunes west of Dornoch, Sutherland, on 3rd October (DM, NW). The other, which may possibly have been the same bird as was seen in Ayrshire the previous month (3: 428), was observed near Kirkholm, Wigtownshire, on 11th October and had been reported as present for a fortnight previous to this (AH, BM per ADW). A **Green Woodpecker** was seen and heard on several occasions between 10th and 23rd October on Tulliallan Moor, Fife, a county for which records are very few (MC, GD, JP, IT). A **Wryneck**, which was caught and ringed at Castletown, Caithness, on 2nd October, was no doubt part of the tail end of the fall of migrants which took place in late September and early October (3: 429) (Caith Gp).

Late **Swallows** do not really become unusual until November, a month for which there are several records this year:

St Andrews, Fife—1 on 6th (JMcF).
Ardross, near Elie, Fife—1 on 13th (DWO).
Kincardine, Fife—1 on 10th (GD, JP, IT).
Aberlady—1 on 6th (JAL, JSO, CPRs).
Johnstone, Renfrew—1 on 27th (AB).
Sandhead, Wigtown—2 on 6th (RCD).

The latest **House Martins** to be reported were two at Elie on 31st October (DWO); one at Liberton, Edinburgh, on 1st November (MAM); and two immatures at Temple, Midlothian, on 7th November (JL). Two **Sand Martins** were still at Newburgh, Aberdeenshire, on 3rd November (PBH).

A brief glimpse was had of a fine male **Golden Oriole** at Kildalton, Islay, on 22nd September, when it flew up from the road into a neighbouring wood (KMC, BCT).

An invasion of tits which took place in Shetland in late September has already been mentioned (3: 430). One **Blue Tit** was still present on Whalsay on 17th December (JHS). Some idea of the scarcity of tits in Shetland can be gathered from the fact that a **Coal Tit** on Fair Isle on 28th October is only the second to be recorded on the island (RHD).

Although one bird was seen in August and odd ones in early September, the first real arrival of **Fieldfares** on Fair Isle did not take place till the end of that month with 25 on 23rd increasing to 500 by 27th (RHD). Further south the earliest reported were four over Kilconquhar on 18th September (DWO). Otherwise the only birds to be reported in September were singles and it was not until early October that good numbers were seen. On 2nd there were about 100 at Whitelaw Cleugh, Midlothian (JB); 50 at Yetholm, Roxburghshire (RSB); 5 at Bridge of Dee, Kirkcudbrightshire (RBT); and about 80 at Summerston, Glasgow (WMME, DJN). The following day small flocks amounting to hundreds in all were passing down Glen Lyon and along Loch Tay in Perthshire (PWS, TW); there were about 70 at Lamford, Kirkcudbrightshire (JND); and some 300 were flying south near Carsphairn, Kirkcudbrightshire (JND). Although most observers agree that there were no very spectacular peaks in passage there seems to have been a strong movement in the central Highlands and south on 10th October when there were large numbers near Dunkeld, Perthshire (RJ); about 500 per hour passing the Menteith area (VMT); a movement involving some 10,000 above thick mist on Glas Maol, Angus (ADKR); and a marked passage of hundreds of birds through Galloway (ELR). The main arrival in the far north was not until later, with numbers in Caithness building up to at least 10,000 during the last week of October (Caith Gp), when there were large flocks everywhere in Orkney as well (PJBS).

Redwing passage took place at about the same time with the same rather indistinct peaks. The first at Fair Isle were two on 4th September, with 12 on 18th increasing to 750 by 27th (RHD). The first at Braemar, Aberdeenshire, was on 24th (TCS); five were at Crinan, Argyll, on 26th (NLS); and on 28th there were three at Blairgowrie, Perthshire (JWC), and 19 at Barr, Ayrshire (GAR). There are various

reports for 2nd October though not involving very great numbers: on the following day about 250 flew south at Carsphairn (JND), the first three had arrived at Caerlaverock (ELR), and there were at least 16 at Bridge of Dee (RBT). With the Fieldfare movement at Glas Maol on 10th there were about 400 Redwing (ADKR); whereas at Menteith this species was in the majority, passing at the rate of 1000 per hour (VMT). In Edinburgh birds could be heard passing over after dark on various dates between 8th October and 4th November (TCS).

Ring Ouzels lingering into October were two at Gullane Point on 2nd (JSO); and one, a female, seen at Fife Ness on 3rd and 10th (MFMM, DWO), and what was possibly the same bird seen on the coast between Anstruther and Crail, Fife, on 30th (WJE). The last **Wheatears** seen were one at Largoward, Fife, on 7th November (DWO), and one on Whalsay, Shetland, on 11th (JHS).

It is gratifying that wintering **Stonechats** are on the increase again: late records are of a pair at Tyninghame on 16th October (AM); an adult male at Blackhill Farm, Glasgow, on 24th October (WMME); and at least one at Dunnet, Caithness, on 14th and 21st November (Caith Gp). Also late in the year, but an uncommon visitor anyway, was a female **Black Redstart** seen at Village Bay, St Kilda, on 20th and 24th October and on 2nd November (PG). Excluding Fair Isle, where three were present during the first half of October, two **Bluethroats** were reported. One was perched and flirting its tail briefly at the roadside near Thurso, Caithness, on 20th October (PM). The other, a freshly dead male **White-spotted Bluethroat**, well marked with a big satin white spot, was found on the grass edge of the beach near North Berwick, East Lothian, on 2nd October. Its identity was confirmed by RHD and at the Royal Scottish Museum, where the skin is preserved. There were big falls of migrants, especially in East Anglia, at this time, but the date is very unusual for this central and south European race (CT).

Migrant **Blackcaps**, and some wintering birds, have been a female at Gladhouse on 10th October (EMS); a pair in a garden in Gullane on 20th (CPRs); a female in Thurso on 27th (Caith Gp); a male in Montrose on 7th November (JD); another at Duns, Berwickshire, on 27th and 28th (SJC); and another in a garden in Edinburgh on 21st December (per GW). There were small numbers at Fair Isle throughout October and one was seen there as late as 14th November (RHD). Five were at Barns Ness, East Lothian, on 2nd October as part of a fall resulting from rough weather the previous day. An immature **Barred Warbler** was also there on 2nd and 3rd (AM, KSM), and another was at Fair Isle on

3rd and 4th (RHD). Other migrant warblers in October included a **Whitethroat** seen and heard at Yetholm on 10th (RSB), and there was a **Lesser Whitethroat** at Fife Ness the same day (DWO). Single **Yellow-browed Warblers** were seen at Fair Isle on 2nd, 10th and 12th October and there was a **Red-breasted Flycatcher** there on 9th (RHD).

A **Grey Wagtail** was seen at the Eden Estuary on 4th December (DJN, DWO), and a **Yellow Wagtail** of undetermined race was at Gullane Bay on 16th October (KM, DWO, JSO).

There are more reports of **Great Grey Shrikes** than usual:

Whalsay, Shetland—1 on 5th and 22nd Oct (JHS).
Kingussie, Inverness—1 on 19th Oct (TSK).
Blairgowrie, Perth—1 on 27th Oct (JWC).
Balmakin, near Colinsburgh, Fife—1 in roadside tree on 9th Nov (DWO).
Peppermill—1 on 20th Nov (MC, JP, IT).
Port Ellen, Islay—1 on 19th Oct (per HK).
Newton Mearns, Renfrew—1 on 4th Nov (RWF).
Browhouses, near Annan, Dumfries—1 on 12th Oct (WA).
Laurieston, Kirkcudbright—1 on 12th Dec (RMr).

A juvenile **Red-backed Shrike** was seen at Yetholm on 3rd October and there was an adult male on the mainland of East Lothian opposite Fidra on 24th (RSB).

Siskin passage at Fair Isle extended from 4th September to 16th October with a peak of 31 birds present on 2nd October (RHD). The larger flocks reported from elsewhere have been of eight birds at Earlsferry, Fife, on 31st October (DWO); 16 over Portmore Reservoir, Peeblesshire, on 7th November (ADKR); and about 60 near Aberuthven, Perthshire, on 19th December (RSB, FMM). It is surprising, but two seen at Aberlady on 4th November seem to be only the second record for the reserve (1: 508) (MJE).

Flocks of **Redpolls** appeared in Shetland from 20th October and many of the birds lingered unusually long (RJT). A large invasion took place on Fair Isle from 20th October, and the majority of the birds involved were very pale (RHD): most were 'Mealy', some were 'Coue's' and one was thought to be 'Hornemann's'; officially these last two races are considered to be a separate species—the Arctic Redpoll—and the records have to be considered by the Rarities Committee. Most of the races interbreed to some extent, forming hybrid swarms of birds with intermediate characteristics, so that exact identification of races is difficult. Other reports are of eight at Griminish, Benbecula, six of which were 'Mealy', on 4th November (DL, GW); seven including two 'Mealy' at Aberlady on 4th December (DWRM, MAM, RLS); four including one 'Mealy' at Bush estate, Midlothian, on 14th November (ADKR); and single pale birds at Dunbar on 17th October (MFMM), and at St Kilda on 4th November (PG).

It has also been a good autumn for **Bramblings** with

passage at Fair Isle throughout October and to 18th November reaching peaks of 110 on 5th and 150 on 20th October (RHD). A great many small flocks have been seen all over the country: some of the biggest have been 25 at Stirkoke, Caithness, on 19th December (Caith Gp); about 20 at Alyth, Angus, on 31st October (RJ); good numbers with about 50 in one flock near Eddleston, Peeblesshire (MGW); large numbers in the Duns area, Berwickshire, from 7th November onwards (DGL); and about 50 at Whittingehame, East Lothian, on 12th December (TCS).

Reports of **Lapland Buntings** are of one on Fetlar on 3rd October (RJT) and of at least one heard calling at Newburgh, Aberdeenshire, on 15th November (MFMM).

Further evidence of the spread of the **Tree Sparrow** is provided by the sighting of three at Riverside, Wick, Caithness, on 21st November (Caith Gp), and three at Stormont Loch, Perthshire, on 13th October (HBs).

Earlier observations—before 1st September 1965

A count of 146 **Canada Geese** at Charleston, North Kessock, on the Beauly Firth on 16th July (DCH), exceeds the highest previously quoted for last year (3: 423). A further summering **Whooper Swan** has also come to light—one which was on Loch Gowan, Achnasheen, Ross, between June and August (DCH).

A **Honey Buzzard** has already been recorded from Orkney on 6th June (3: 423). About the same time one was at Fair Isle from 27th to 29th May (*Bird Study* 12: 340), and one was at Sumburgh Head in the south of Shetland on 2nd June (RR per PED), possibly the same bird.

A **Quail** seen on St Kilda on 29th July was the second to appear there last year (see 3: 430) (MJ).

What is apparently the first occurrence of the **Herring Gull** breeding in East Inverness-shire took place in an unusual site in Inverness last summer. On 17th May the birds were found to have built a nest on top of a disused chimney stack which they were sharing with a young rowan tree. The chicks hatched but were unfortunately blown out of the nest in bad weather on 12th July (JFW per JMcG).

The surprisingly frequent assumption by textbooks that **Nightjars** breed throughout Scotland is completely unjustified—the discovery of one reeling at Ben Eighe Nature Reserve, Wester Ross, on 13th June is therefore worth recording (DCH).

Corrections

Vol. 3: 424 The Quail at Thornhill was in Perthshire, not Stirlingshire.
Vol. 3: 426 The Gladhouse record listed under Curlew Sandpiper refers to a Green Sandpiper and should be transferred to p. 425.

Reviews

Birds of Town and Village. Paintings by Basil Ede. Text by W. D. Campbell. London, Country Life, 1965. Pp. 156; 36 seven-colour litho plates. 126/-.

The publication of a lavish bird book of this nature in these days is an event of more than ordinary interest and merits consideration. Concerned frankly with the popular and aesthetic side of birdwatching, the idea of picking 56 birds the majority of which can be seen almost anywhere throughout Britain in the nesting season is a happy one. To commission specially, as we are told, 36 paintings by one artist to suit the letterpress is another matter.

If it is also the purpose, and a laudable one, to make known the merits of Basil Ede as a painter of birds to a wider public, it must be said that it seems a hard way for the painter. One would have preferred to see a selection of the artist's own, picked by him, to offer the fairest target for opinion on his status as a bird painter if we are to attempt to compare his work with that of the great bird painters of the past. Comparisons may be odious but they are unavoidable. Our first impressions were most favourable—excellent botanical backgrounds, eye-catching rich colouring on every plate—have we here a worthy successor to Archibald Thorburn, following that master's style?

We have to say that on closer study this impression was not maintained. The best feature of Mr Ede's pictures is his plumage work, which is at times as good anything we have seen. But there are too often faults in the drawing. For instance on the very first plate, of the Rook and Carrion Crow, the birds are too short; in the second plate the Jackdaw somehow fails to look crow-like; and the studies with extended wings of the Magpie and particularly the Jay are not very successful. In the Starling plate again the characteristic pose of the bird is lacking, and so on throughout the plates.

With some of the smaller birds Mr Ede is more successful. The plates of the Goldfinches, Chaffinches and Tree and House Sparrows are very good indeed and the plate of the Skylarks is excellent. Then we come to the plate of the wagtails—the Pied completely misses the sharp perkiness of this bird so familiar to us all as he struts about our lawns, and the female Grey Wagtail for some reason looks much bigger than the male. The titmice and warblers are very good indeed, perhaps the best pictures in the book. The Turdidae, if we except the Song Thrush and Redwing, are disappointing—the Fieldfare is not big enough, the Mistle Thrush not grey enough, the cock Blackbird not black enough and the yellow of his bill too weak. Plate 25 gives us a good picture of a Swallow and a poor one of the Swift—not in the least like this black, aggressive, menacing, screaming pirate of a bird as it swoops among terrified House Martins.

And so on. Perhaps Mr Ede has tried too hard—no doubt as a result of the special commissioning. We feel sure that something more spontaneous would show his work to better advantage.

W. D. Campbell's text is informative and very readable, although it is doubtful if his efforts to rename the spotted woodpeckers will meet with much approval. After all we still talk about the Black-headed Gull, and who would want to change that at this date?

The book is excellently printed and the plates are on the whole well produced by seven-colour litho, although there are signs of difficulty

with the greens and blues at times.

At six guineas the book is unavoidably somewhat expensive and it must therefore be judged against the highest standards but all things considered it may be regarded as good value, and a worthwhile addition to the titles of well illustrated books on British birds. The future development of this gifted bird artist will be watched by many of us who feel that it would be a great misfortune if the bird artist were ever completely superseded by the colour photographer. There is plenty of scope for both in the field of bird illustration.

RITCHIE SEATH.

The Woodpigeon. New Naturalist Special Volume 20. By R. K. Murton. London, Collins, 1965. Pp. 256; 17 plates (one in colour) and 22 figures. 25/-.

We have come a long way since Collinge, who graded the economic importance of birds according to the proportions of useful and useless seeds and harmful, neutral and beneficial insects they ate. Since there is no basis for comparison between the taking of, say, grain and wireworms, the approach is of very limited value.

The modern method is first to ask why the animal is a pest at all and what is the precise nature of the damage done. For example, grain found in the crop of a bird may have come from fields just sown, from feeding troughs, from standing crops, from stooks, from experimental plots, or from stubble. The economic significance of grain taken from these sources is very different. Second, the modern biologist, looking for means of controlling a pest animal, goes back to square one and learns as much as he can about the ecology, biology and physiology of the animal. By so doing he may well find an unsuspected weak link in its life history which can be exploited; and he may well expose the inadequacies of current control schemes.

This book is about just this. Its twelve chapters cover pigeons in general and British pigeons in particular—food and feeding ecology, behaviour, breeding, population dynamics, migration, diseases, the Woodpigeon as a pest, and its control. The approach is in the best tradition of the Ministry of Agriculture's field station in Surrey, where Dr Murton works.

Most people expect birds to have young in the nest in spring and early summer and most do. The Woodpigeon is an exception since most young are in the nest in July, August and September, and Dr Murton relates this to the availability of grain, on which it feeds its young. The concurrence of young in the nest and grain in the fields could be coincidental but Dr Murton goes on to show that young in the nest in May and June do less well than those in the nest from July to September. April-hatched young, although few, do well—an exception which proves the rule, since sown grain is available in that month. The inference is that Woodpigeons depend on grain to feed their young and that there is selection against those parents which breed at the wrong time.

The observational method of investigating feeding ecology was developed at Oxford by P. H. T. Hartley and John Gibb in the 1940s and time and time again it has shown its great worth. Dr Murton uses this approach, supplemented by crop analyses, behavioural studies, exclosure plots, measurements of the food available, and experimental feeding. The result is a fascinating account, with statements on such niceties as the threshold of abundance of food at which Woodpigeons give up searching and try elsewhere.

Dr Murton writes that flocking enables intra-specific competition to be

more efficient by the operation of a dominance hierarchy in relation to food resources. But a non-flocking species could achieve the same effect by a territorial system which excluded some individuals from the necessities of life. Later Dr Murton dismisses homeostasis in the Woodpigeon, maintaining that the environment kills them. But the Woodpigeons are acting positively to portion out the food unequally under stress of shortage (see also *Bird Study* 3: 180-190 for the same in Rook and Jackdaw) and this is surely a homeostatic or negative feed-back device.

By ingenious calculations Dr Murton estimates that the average Woodpigeon does 3/- worth of damage a year and that it costs at least 1/6 to shoot each bird. National schemes for control are proved valueless, since winter shooting rarely kills as many as are going to die anyway before they can do the most serious damage. For the moment, control measures concentrate on the prevention of local damage, but experiments with cheap selective bait continue.

The Woodpigeon is presumably intended for a wide and non-specialist public. If so, I think the text is often too involved with fine detail; and the citing of references, which can disfigure a page so easily, may upset those who are not used to this convention. Likewise, although the photographs are excellent, the tables are too complicated, most of them trying to put across several points simultaneously.

Nevertheless this is a good book and should be read by anyone interested in birds as birds; in birds in relation to man-made habitat; and in pest control.

J. D. LOCKIE.

The Bird Table Book. By Tony Soper. Illustrated by Robert Gillmor. Dawlish, David & Charles (and London, Macdonald), 1965. Pp. 140; 20 photographs (12 plates) and 49 line drawings. 21/-.

'Bird gardening' is by no means a neglected aspect of ornithology, and there are countless people who enjoy seeing birds in their gardens but would not lay claim to even the modest title of birdwatchers. Books dealing with birds and gardens are virtually non-existent, however, and up till now we have had to rely on scattered sections in more general works and a growing pile of pamphlets for information and advice. All this has changed with the publication of this book; here at last is a comprehensive manual about birds and gardens.

It is no easy task to write a book on anything and combine a conversational style with a concise account of the subject—but Tony Soper has done just that. Chapter by chapter he tells us how we can attract birds to our gardens (and encourage those that already come), what natural foods we can make use of and how we can supplement them, and how we can improve natural nesting sites and add to them by supplying nest boxes. All sorts of problems and queries arise with feeding birds, and with erecting bird tables and nest boxes—and all the answers are here in this book. In addition, useful advice is given on the problems of predators and poisons.

There is a growing interest in garden visitors other than birds, and the author provides for this to some extent in a chapter dealing briefly with various insects and toads and, in greater detail, with hedgehogs.

The latter half of the book is devoted to notes on most of the species which can be expected to occur in British gardens, and to a comprehensive series of appendices dealing with 'recipes,' 'bird furniture,' birds which will use feeding stations and nest boxes, life-spans of the commoner

species, treatment of casualties, organisations connected with birdlife, birds and the law, and recordings of bird song. There is also an extensive bibliography.

There can be no doubt that this book is made all the more worthwhile by its numerous illustrations. The series of photographs is first class, even if that opposite page 70 seems to be a Spotted and not a Pied Flycatcher. As a change from the more normal garden species, there is even a photograph of a Myrtle Warbler opposite page 106. Robert Gillmor has surpassed himself in illustrating this book; his line drawings—whether portraits, diagrams or cartoons—are all in that refreshingly simple style which we have come to know so well and admire so much, adding a final touch to what must already be an irresistible book.

M. J. EVERETT.

The Young Specialist Looks at Birds. Young Specialist series No. 3. By Heinrich Frieling. Translated and adapted by Winwood Reade. London, Burke, 1965. First published as *Was fliegt denn da?*, Stuttgart 1959. Pp. 127; 40 plates (31 in colour), line drawings. Limp covers 7/6; boards 12/6.

This book has a few virtues. It is cheap, contains several hundred pictures, and gives a brief bird-spotter's note on 396 species, described as being all the birds a beginner is likely to see in Britain or in central Europe.

Unfortunately it cannot be recommended. The standard of illustration is often low: I will buy anyone a pint at the next Dunblane gathering who can identify those 12 seventeenth century warblers facing page 48. Even when the standard of drawing is fairly high, as in plate I of the hawks, it is marred by curious eccentricities such as giving each of the falcons fan-shaped white outer tail feathers that completely falsify the true silhouettes. There is no indication of scale in the drawings: you have to read the text on page 76 to realise that the Little Grebe is smaller, and not larger, than the divers; the Azure Tit is twice as large as the Subalpine Warbler on plate VII but no hint that this is wrong is offered. Plate IV illustrates a Surf Scoter and calls it a Velvet Scoter. There is no picture or note of the Thrush Nightingale, a common breeding bird in east central Europe, though both the Sooty Tern and the Terek Sandpiper reach the notes.

Nor is the text always much better than the illustrations. The Marsh Warbler is said to sing in March (p. 32), the Firecrest to be a "resident and partial migrant" in Great Britain (p. 46). The indications of size are often ludicrous—pity the poor beginner who examines a flock of ducks bearing in mind that the Tufted and Long-tailed are "about same size as Mallard" but the Red-breasted Merganser is "smaller than Mallard"! If instead he turns his attention to the waders he will have to work this out: the Knot is "about same size as thrush," the Dunlin is "about same size as Starling," the Sanderling is "about same size as lark," but the Purple Sandpiper is "smaller than thrush, larger than Dunlin."

There are already several fine books for young beginners in birdwatching. Some are calculated to arouse interest by their attractive presentation: others are meant to help field work by their accurate information. This is neither sufficiently attractive nor sufficiently accurate to count on either score.

T. C. SMOUT.

The Birds of the Isle of Lewis : 1963-1965. By Norman Elkins, 34 Kingsland Road, Alton, Hampshire. Unpublished duplicated typescript. Pp. (1) + 14.

A brief introduction is followed by a valuable personal checklist giving details of 140 species and based on two and a half years working from Stornoway. Copies have been placed in the library at 21 Regent Terrace.

A. T. M.

Letter

SIR,

Notes on the birds of Berneray, Mingulay and Pabbay

Having been stationed at the lighthouse on Berneray in 1956 and 1957 I was very interested in the paper by Diamond, Douthwaite and Indge (3: 397). A few notes on some of the changes on Berneray may be of interest:

Eider Four nests found in 1956 and three in 1957.
Oystercatcher Thirteen pairs in 1957, against 20 in 1964.
Snipe Two pairs in 1957, against one in 1964.
Arctic Tern Two pairs bred unsuccessfully in 1957, so the successful return of nine pairs in 1964 is interesting.
Rock Dove Only two nests were ever found by me.
House Martin A pair bred in 1956, but not in 1957, in the old broch near the lighthouse.
Hooded Crow Bred in both years in gully at southwest corner of island.
Starling Ten pairs were present in 1957, against two in 1964.

K. G. WALKER.

Request for Information

Sand Martin colonies. For six years the B.T.O. has been running a ringing enquiry on this species. Many thousands are ringed in England each autumn on passage and at roosts, and a number of these have been caught in Scotland in subsequent summers. Few ringers have worked the area between the Central Lowlands of Scotland and the Caledonian Canal. Chris Mead, 4 Beaconsfield Road, Tring, Hertfordshire, would therefore be very pleased to hear of any colonies of more than ten pairs recorded in the 1960s in this area, where he hopes to spend three weeks catching Sand Martins in June. He already has details of the colonies reported to Bob Dowsett last year.

The Scottish Ornithologists' Club

SUMMER EXCURSIONS

Important Notes

1. Members may attend excursions of any Branch in addition to those arranged by the Branch they attend regularly.

2. Where transport is by private cars please inform the organisers if you can bring a car and how many spare seats are available. All petrol expenses will be shared.

3. Please inform the organiser in good time if you are prevented from attending an excursion where special hire of boats or buses is involved. Failure to turn up may mean you are asked to pay for the place to avoid additional expense for the rest of the party.

4. Please bring picnic meals as indicated (in brackets) below.

ABERDEEN

For all excursions, please notify Miss F. Greig, 9 Ashgrove Road, Aberdeen (Tel. 40241, Ext. 342, 9 a.m.-5 p.m.), one week in advance.

Thursday 21st April. NIGG BAY. Meet Nigg bus terminus 5.45 p.m.

Sunday 15th May. BLACKHALL FOREST (subject to permission). Meet Blackhall main gate 10.30 a.m. (lunch and tea).

Sunday 12th June. DINNET LOCHS (lunch and tea).

Sunday 26th June. FOWLSHEUGH. Meet Crawton 11 a.m. (lunch).

Sunday 4th September. YTHAN ESTUARY AND LOCHS. Meet Culterty 10.30 a.m. (lunch).

Sunday 30th October. LOCH STRATHBEG. Leader: J. Edelsten (lunch).

AYR

Saturday 23rd April. CULZEAN CASTLE, MAYBOLE (by kind permission of the National Trust for Scotland). Leader: Dr M. E. Castle. Meet Wellington Square, Ayr, 2 p.m. or car park, Culzean Castle, 2.30 p.m. (tea).

Saturday 7th May. DRUMLANRIG CASTLE, THORNHILL, DUMFRIES (by kind permission of the Duke of Buccleuch). Leader: J. F. Young. Meet Wellington Square, Ayr, 1 p.m. or entrance to Queens Drive (near main road), Drumlanrig Castle, 2.30 p.m. (tea).

Saturday 18th June. BALLANTRAE AND NEW GALLOWAY. Leader: R. M. Ramage. Meet Wellington Square, Ayr, 10 a.m. (lunch and tea).

Saturday 30th July. MEIKLE ROSS, SOLWAY COAST, KIRKCUDBRIGHTSHIRE. Leader to be arranged. Meet Wellington Square, Ayr, 9 a.m. (lunch and tea).

Saturday 27th August. FAIRLIE FLATS. Leader: S. L. Hunter. Meet Wellington Square, Ayr, 10.30 a.m. or on road immediately in front of Hunterston Nuclear Power Station 11.30 a.m. (lunch).

Saturday 17th September. ABERLADY BAY NATURE RESERVE. Leader: G. A. Richards. Meet Wellington Square, Ayr, 9 a.m. or Timber Bridge, Aberlady Bay, 11.30 a.m. (lunch and tea).

DUMFRIES

Sunday, 15th May. KINMOUNT and WOODCOCKAIR, ANNAN (by kind permission of the Trustees of the late Mr C. Brook). Leader: R. T. Smith. Meet Ewart Library, Dumfries, 1.30 p.m.

Sunday 12th June. ST BEES HEAD. Leader: Ralph Stokoe. Meet Ewart Library, Dumfries, 9.30 a.m. (lunch and tea).

Sunday 10th July. BALCARRY CLIFFS. Leaders: John Young and A. D. Watson. Meet Ewart Library, Dumfries, 1.30 p.m.

Sunday 4th September. CAERLAVEROCK NATURE RESERVE (by kind permission of the Nature Conservancy). Meet Eastpark Farm, Caerlaverock, 2 p.m.

DUNDEE

Members who wish to participate should meet promptly at 9 a.m. at City Square, Dundee, after previously informing the Secretary, J. E. Forrest, 5 Glamis Place, Dundee (Tel. 66664), in order that transport may be arranged.

Sunday 3rd April. THE HERMITAGE, DUNKELD, and beyond.

Sunday 1st May. ST CYRUS.

Weekend 13th-16th May. WHITEBRIDGE, INVERNESS-SHIRE. Provisional booking has been made at Whitebridge Hotel for party of 10. Members should book direct with the hotel, notifying the Manager that they are attending the Branch excursion. Transport to be arranged.

Sunday in June. BASS ROCK (date to be notified later).

Sunday in July. DOTTEREL HUNT (date to be notified later).

Sunday 21st August. MONTROSE BASIN and SCURDYNESS.

Sunday 18th September. FIFE NESS and KILCONQUHAR LOCH.

EDINBURGH

Saturday 7th May. ABERLADY BAY NATURE RESERVE. Leaders: K. S. Macgregor, W. K. Birrell and C. N. L. Cowper. Meet Timber Bridge 2.30 p.m. (tea).

Saturday 21st May. PENICUIK HOUSE GROUNDS (subject to permission of Sir John D. Clerk, Bart.) Leader: Tom Delaney. Meet Penicuik Post Office 2.30 p.m. (tea).

Sunday 5th June. THE HIRSEL, COLDSTREAM (by kind permission of Sir Alec Douglas Home). Leader at Hirsel: Major The Hon. Henry Douglas Home. Excursion by private cars. Applications by 28th May to J. A. Stewart, 109 Greenbank Crescent, Edinburgh 10 (Tel. MORningside 4210), stating number of seats available. Cars leave Edinburgh from square behind National Gallery 10.30 a.m. for Hirsel at 12 noon (lunch and tea).

Saturday 11th June. ISLE OF MAY (numbers limited to 12). Private cars. Applications by 4th June to Alastair Macdonald, Hadley Court, Haddington (Tel. 3204), stating number of seats required or available. Party meets and sails from West Pier, Anstruther, 11 a.m. prompt. Cost of boat about 12s 6d (lunch and tea).

Saturday 12th June. ISLE OF MAY. Arrangements as for 11th June.

Saturday 2nd July. BASS ROCK (by kind permission of Sir Hew Hamilton Dalrymple). Leader: I. V. Balfour Paul. Applications by 25th June to Miss Olive Thompson, Bruntsfield Hospital, Edinburgh. Boat leaves North Berwick Harbour 2.30 p.m. returning about 7 p.m. Tickets (approx. 10s) must be purchased at Harbour Office (tea). If weather is unsuitable for landing an alternative excursion from North Berwick will be arranged.

Saturday 17th September. ABERLADY BAY NATURE RESERVE. Arrangements as for 7th May.

GLASGOW

Saturday 26th March. BARR MEADOWS. Leader: R. G. Caldow. Meet at Lochwinnoch Station Yard 2.30 p.m.

Sunday 5th June. LITTLE CUMBRAE (by kind permission of Little Cumbrae Estate Limited). Leader: D. J. Norden. Applications by 21st May to G. L. A. Patrick, 11 Knollpark Drive, Clarkston, Glasgow. Boat leaves Fairlie 12 noon (lunch and tea).

"The permission to visit Little Cumbrae is granted on condition that the Company does not warrant the safety of the premises and is under no obligation to protect you from injury or damage by reason of the state of the premises. By entering the said premises you will be deemed to have accepted these conditions."

Members participating in this excursion will be expected to sign an acknowledgment that they have read and agree to the said conditions.

Saturday 11th June. LOCH LOMOND NATURE RESERVE (by kind permission of the Nature Conservancy). Leader: T. D. H. Merrie. Meet Gartocharn Post Office 2 p.m. (tea).

Wednesday 15th June. HORSE ISLAND (by kind permission of the R.S.P.B.). Leader: D. J. Norden. Applications by 21st May to G. L. A. Patrick (address above). Boat leaves Ardrossan Harbour 6.30 p.m. Fare approx 5s.

Saturday 25th June. HORSE ISLAND (by kind permission of the R.S.P.B.). Leader: R. G. Caldow. Applications by 4th June to G. L. A. Patrick (address above). Boat leaves Ardrossan Harbour 2.30 p.m. Fare approx. 5s (tea).

INVERNESS

Private car transport and picnic flasks for all excursions. Applications to the Outings Secretary, Melvin Morrison, 83 Dochfour Drive, Inverness (Tel. 32666).

Saturday 7th May. MUNLOCHY BAY HERONRY. Meet Ness Bank Church, Riverside, Inverness, 2 p.m. or North Kessock 2.45 p.m.

Sunday 15th May. LOCH-AN-EILEAN, ROTHIEMURCHUS. Leader: Hon. Douglas N. Weir (organiser Speyside Predator Survey). Meet Station Square, Inverness, 10.30 a.m. prompt.

Sunday 5th June. CULTERTY FIELD STATION, NEWBURGH. Meet Station Square, Inverness, 9.30 a.m. prompt.

Saturday 25th June. BUNCHREW WOODS and BEAULY FIRTH (Canada Geese). Meet at Ness Bank Church 2 p.m.

ST ANDREWS

Applications, not later than one week before each excursion, to Miss M. M. Spires, 2 Howard Place, St Andrews (Tel. 852).

Saturday 21st May. KILCONQUHAR LOCH (by kind permission of Nairn Estates). Meet North Lodge 2.30 p.m. (tea).

Saturday 28th May. DUNBOG and LINDORES. Cars leave St Andrews Bus Station 2 p.m. (tea).

Sunday 12th June. ST SERF'S ISLAND (subject to permission of Kinross Estates). Boats leave the Sluices, Scotlandwell, 11 a.m. (lunch and tea).

Saturday, 18th June. TENTSMUIR. Cars leave Bus Station 2 p.m. (tea).

GLASGOW BRANCH ANNUAL DINNER

The Glasgow Branch Annual Dinner will be held in the Grosvenor Restaurant, Gordon Street, Glasgow C.1, on Thursday 28th April at 7.30 for 8 p.m. Tickets, 27s 6d, on sale from the Secretary, Glasgow Branch.

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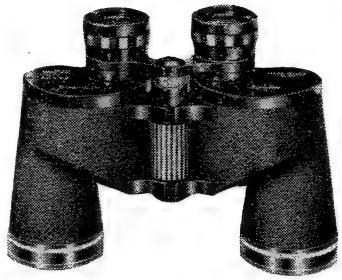

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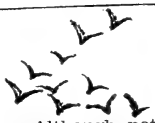

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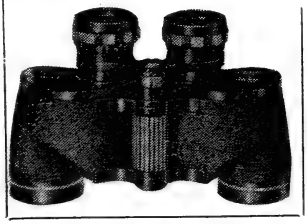

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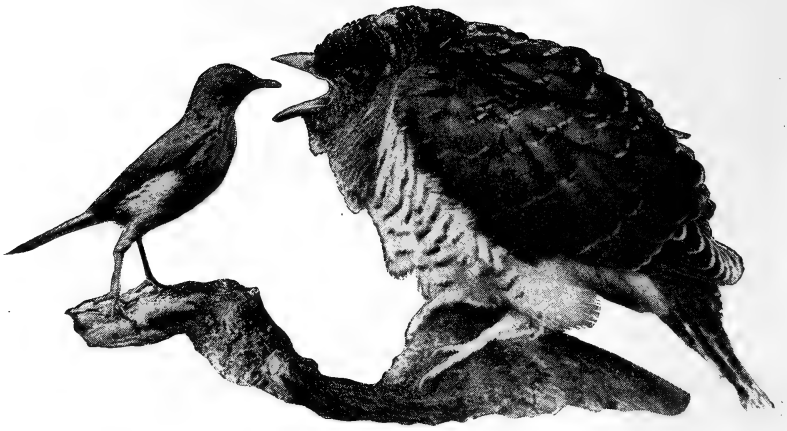

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SONGSTER FOOD for Blackbirds, etc., 3½ lb 6/9, 7 lb 9/9, 14 lb 17/-, 28 lb 25/6, 56 lb 46/-, cwt 88/-

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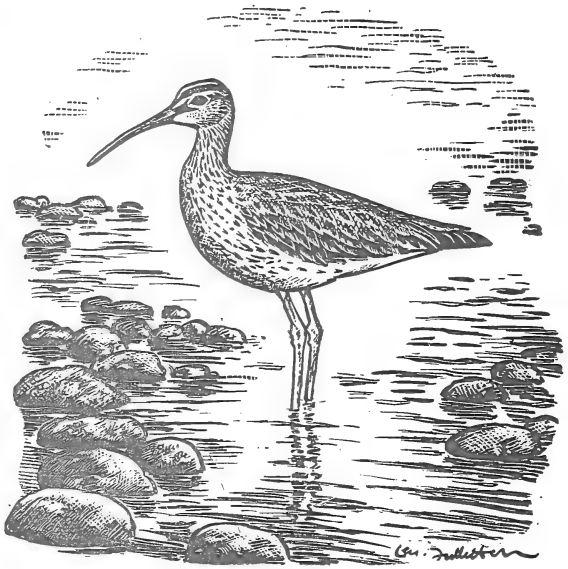

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Vol. 4 No. 2 *Summer 1966*

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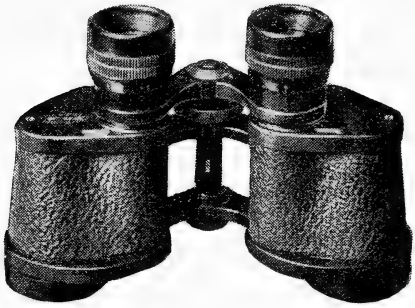

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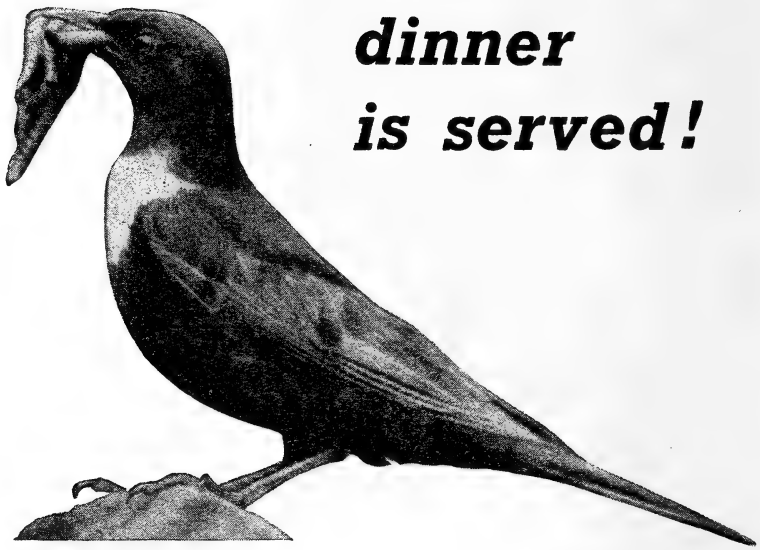

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Volume 4 No. 2 **Summer 1966**

Edited by A. T. MACMILLAN with the assistance of D. G. ANDREW, T. C. SMOUT and P. J. B. SLATER. Business Editor, T. C. SMOUT.
Cover Design (Whimbrel) by LEN FULLERTON.

Editorial

Scottish Bird-Islands Study Cruise Issue

Scottish Bird-Islands Study Cruise. It is our hope that everyone will enjoy this unique tour of Scotland's spectacular bird-islands; and especially that those who have come from abroad for the International Ornithological Congress and the International Conference on Bird Preservation will take home pleasant memories of their visit to Scotland. The S.O.C. is honoured to be their host.

Five distinguished Scottish ornithologists have prepared a series of papers for this issue of *Scottish Birds*. We hope it will paint an interesting picture of the Scottish ornithological scene for native and visitor alike. The usual shorter features—Short Notes, Current Notes, Obituary, Reviews, and Letters—have been held over to allow us to publish these papers in full so that anyone who does not at once take out a subscription may still read them to the end.

Scottish Ornithologists' Club Endowment Fund. As recorded on another page, the club already holds funds in trust from which the income may be used for the advancement of ornithology in Scotland or elsewhere. An endowment fund is now being created so that those who want to make gifts or legacies for such purposes may be quite certain that their money will be used in the way they intend. Full details of this important venture may be had from the Scottish Centre for Ornithology and Bird Protection, 21 Regent Terrace, Edinburgh 7. The fund will welcome support and will seek to use its resources for projects that are likely to produce worthwhile results—for example, to give help to the Scottish bird observatories and others with the purchase of equipment needed for their studies, to assist with the costs of printing and illustrating valuable papers, to finance substantial enquiries and useful expeditions, and generally to provide the necessary money wherever it may be most usefully employed for the advancement of ornithology, particularly in Scotland.

Ornithology in Scotland

A historical review

IAN D. PENNIE

The ornithological history of Scotland may be said to begin with the Gannet, for in the *Codex* of the Cistercian Abbey of Cupar, written about the year 1447 by Walter Bower, Abbot of Inchcolm, there is a brief reference to "Insula de Bass, ubi solendae nidificant in magna copia." John Major or Mair (1470-1550) has a detailed description of the Bass Rock and its Gannets in his *Historiae Majoris Brittanniae* (1521), but his interest is only in the Gannet as an article of food, a source of fat and a means of providing fish, which were taken from the nests by the inhabitants of the island. Major was a native of North Berwick and was educated at Haddington, Cambridge and Paris before returning to Glasgow University as Principal Regent, so it may well be that his description of the Bass derives from his own observation.

Hector Boece (*c.*1465-*c.*1536), a native of Angus, was a contemporary of Major in Paris, where he was studying philosophy when he received a call from Bishop Elphinstone to return to Scotland and become the first Principal of the University and King's College of Aberdeen. Boece's *magnum opus* was his *Scoticorum Historiae* (1527) in which he gives a description of the Bass Rock, evidently taken from Major, but mentioning also the Gannets of Ailsa Craig, and in addition appends a list of Scottish birds—Falcon, Goshawk, Sparrowhawk, Merlin, "Waterfoulls," Capercaillie, Red Grouse, Black Grouse and Great Bustard. The last he describes in some detail, and this is the sole authority for the much quoted record of breeding in Berwickshire.

With Major and Boece it can be fairly said that Scottish history began, but the true dawn of the study of natural history was not discernible before the lapse of many more years, and no mere bird was worthy of notice unless it could be of use in falconry or for human food or medicine: even in the colleges Aristotle remained the prime authority, without reference to the living subject or dead specimen. This persisted throughout the sixteenth century: Dean Monro's celebrated catalogue of the Scottish islands (1549)—which includes Man and Rathlin—contains practically no reference to birds other than falcons and Gannets, as if emphasising their economic importance, but perhaps also reflecting the comparative ease of sea travel at this period compared with the utter impossibility of communication by

land in a wild and sparsely populated country. The accuracy of his records of Gannets on Rhum and Eigg has never been confirmed, but he gives the oldest known account of the harvesting of Gannets on Sula Sgeir, a practice which endures to this day:

> "This ile is full of wylde foulis, and quhen foulis hes ther birdes, men out of the parochin of Nesse in Lewis use to sail ther, and to stay ther seven or aught dayes, and to fetch hame with them their boitt full of dray wild foulis, with wyld foulis fedders."

On Sula Sgeir also he excels himself with his lovely description of the colk (Eider), to the regret of all his readers that he did not pay similar attention to other species:

> "In this ile ther haunts ane kynd of foule callit the colk, little less nor a guise, quha comes in the *ver* to the land to lay her eggis, and to clecke her birds quhill she bring them to perfytness, and at that time her fleiche of fedderis falleth of her all hailly, and she sayles to the mayne sea againe, and comes never to land quhyll the zeir end againe, and then she comes with her new fleiche of fedderis. This fleiche that she leaves zeirly upon her nest hes nae pens in the fedderis, nor nae kynd of hard thinge in them that may be felt or graipit, bot utter fyne downes."

William Harvey, the physiologist, visited the Bass Rock in 1633 and, though seeming more interested in the encrustation of bird excreta than in the birds themselves, made the interesting observation that the disused Gannets' nests were sold for firing. He was followed in 1661 by the great naturalist John Ray, who not only described the Gannets but tasted them, quoted the current price of one shilling and eightpence plucked, which he thought very dear, and reckoned that the proprietor made a profit of £130 sterling per annum from the birds. Ray listed other birds nesting on the Bass—"... the scout, which is double ribbed; the cattiwake, in English cormorant; the scart, and a bird called the turtledove, whole-footed, and the feet red." Scout is either Guillemot or Razorbill; scart is of course the Cormorant in English, evidently transposed here in error, and the last is the Black Guillemot.

Several other seventeenth century accounts of the gannetries of the Bass Rock and Ailsa Craig are quoted by Gurney (1913, 1921) and one is hard put to it to find as many contemporary accounts of the birds of the whole of the rest of Scotland. One of the few is Sir Robert Gordon's list of the birds of Sutherland, compiled about 1630 but not published until 1812. This list, already quoted in *Scottish Birds* (Pennie 1962), although not in itself of great value does give some idea of Sutherland as it was, and is at least an attempt to break away from the traditional hawks and game birds only.

Not until 1684 is to be seen the first glimmer of scientific zoology in Scotland, for in that year was published in Edin-

burgh the first book on Scottish natural history, Sir Robert Sibbald's *Scotia Illustrata sive Prodromus Historiae Naturalis*, a folio volume of which 113 pages are devoted to botany, 12 to mammals and 9 to birds. Altogether about two dozen species of birds are described and 11 figured in the plates. A description of Sibbald's *Prodromus* and a full assessment of his contribution to Scottish ornithology have already been made (Pennie 1964). Sibbald appears to have been encouraged to pursue his study of natural history by Andrew Balfour, who in turn had been a student of William Harvey's. In his methods Sibbald antedated by a century Sir John Sinclair by circulating a questionnaire to prominent persons throughout the country, principally the bishops and clergymen. Several of his correspondents were thereby induced to publish comprehensive accounts of the history and topography of the localities in which they lived. Notable among these was the Rev. James Wallace, who graduated at King's College, Aberdeen, in 1659 and became parish minister of Kirkwall. Fired by Sibbald's enthusiasm he wrote *A Description of the Isles of Orkney* which contains many bird records and is dedicated to Sibbald. Wallace died in 1688 but his book was not published until 1693 and was reissued by his son in 1700. Thus began the documentation of the natural history of the North Isles, and a tradition which has persisted ever since.

The intrinsic value of Sibbald's ornithological work may not be great. Nevertheless, the stimulus created both by his published work and by personal contact was far-reaching, and his influence on the study of Scottish natural history in its broadest sense was profound. As an instance of this, there is every reason to believe that it was as a result of personal association with Sibbald that Martin Martin was encouraged to make his journeys to the Western Isles and to publish his observations in what have become the two most valued and widely read books ever written on any part of Scotland. These were of course *A Late Voyage to St Kilda* (1698) and *A Description of the Western Islands of Scotland* (1703). Little is known of Martin beyond the fact that he was a Skyeman who graduated M.A. at Edinburgh University in 1681 and subsequently studied medicine at Leyden. It is quite safe to say that no subsequent writer has stimulated more interest in the islands of Scotland; his notes are carefully and accurately made, yet he was no ornithologist in the accepted sense of the word and one detects in almost all his bird records the inference that it is still only the fact that the birds are either useful or detrimental to the interests of man that makes them worthy of inclusion. Indeed, more was written on the natural history of Orkney, Shetland and St Kilda, up to almost the close of the eighteenth century, than

on all Scotland, until during the last decade Sir John Sinclair produced *The Statistical Account of Scotland,* an elaboration on a vast scale of what Sibbald had attempted a century earlier.

Sir John Sinclair of Ulbster (1745-1835), Member of Parliament for Caithness and President of the Board of Agriculture, conceived the idea in May 1790, when he was a lay member of the General Assembly of the Church of Scotland, of gathering together a uniform description of the whole of Scotland from material supplied by the local ministers, about 900 in all. The fulfillment of this enterprise took nine years and resulted in 21 volumes. The parochial descriptions necessarily vary greatly in quality and content but the whole gives the most complete picture available of natural and social conditions in Scotland at the time, much of which is of great value to the ecological historian. The questionnaire had 166 items; 43 of these pertained to geography and natural history, and one asked specifically about the birds: "What quadrupeds and birds are there in the Parish? What migratory birds? and at what times do they appear and disappear?" The accounts of the various parishes were published in the order in which they were received from the ministers and are consequently completely haphazard, but Mullens and Swann (1917) give a very useful index to the ornithological content of the whole series, a set of which is available for reference in the S.O.C. Library.

In 1761 there appeared on the Scottish academic scene a personality whose ultimate influence on the study of ornithology in Scotland was far greater than is generally realised and yet one whose name, even in his own university, is almost forgotten. This was William Ogilvie, appointed Assistant Professor of Philosophy to King's College, Aberdeen, that year. He was later promoted to Regent, and finally in 1765 became Humanist, or professor, of Latin, with the suggestion that as such he should also give a course of lectures upon antiquities and history, both political and natural. Commencing about 1772 Professor Ogilvie began, according to Douglas (1782),

> ". . . of his own accord to put together a collection of specimens for a museum of natural history in King's College . . . and in the various branches of zoology as might serve to excite the liberal curiosity of youth, and to make them, in some measure, aquainted with the immense variety of the works of nature . . . One is astonished to find so large a collection of birds, fishes, marbles, spars etc., etc. accumualted in so short a space."

Professor Ogilvie had a printed *Synopsis of Zoology* which he used in teaching his natural history class. This was a small pamphlet containing summaries of classification, structure and function, but whether it was actually published for sale or

merely printed for his own personal use is not clear. Ogilvie retired in 1817 and continued to live in Old Aberdeen, where he died at the age of 83.

It can be safely assumed that one whose liberal curiosity was thus excited was the young William MacGillivray, who had come from Harris to be educated in Aberdeen, his birthplace. He had lived in Harris from the age of three, his father being on active service as an army surgeon. MacGillivray graduated in Arts at King's College in 1815. Although he subsequently studied medicine, his first love was obviously natural history, and he soon became a proficient botanist and a field worker of immense energy, walking prodigous distances on his excursions. He made a practice of walking from Aberdeen to Poolewe on his way home to Harris at the end of the college term, and leaving on 7th September 1819 he actually walked to London, where he arrived on 21st October still in sufficiently good condition to commence visiting the British Museum and other institutions.

The following year he left Aberdeen and, having attended the lectures of Professor Jameson, who then occupied the chair of Natural History in Edinburgh, was subsequently appointed Professor Jameson's assistant and secretary, but resigned from this post after a few years to give himself more time for study and travel, maintaining himself meantime by free-lance journalism. In 1831 MacGillivray succeeded Dr Robert Knox, the comparative anatomist whose name survives in another, less fortunate, connection, as Conservator of the Museum of the Edinburgh College of Surgeons, and entered upon the busiest and most productive period of his life. In the previous year he had formed a friendship with John James Audubon, to whom he had been introduced by James Wilson, friend of Sir William Jardine, and *inter alia* natural history editor of the *Encyclopaedia Britannica,* and in addition to carrying out his museum duties collaborated with Audubon in the *Ornithological Biographies.*

In MacGillivray's first book, *Descriptions of the Rapacious Birds of Great Britain* (1836), dedicated to his friend Audubon, we can see that he had begun as he intended to continue. Not only are there the fullest descriptions yet to be found in any British bird book, and notes on the author's field observations on bird behaviour, but also examples of MacGillivray as an artist, in the woodcuts of his meticulous drawings of the alimentary tract; for, as he says in the preface, "It must be obvious that a bird is not merely a skin stuck over with feathers, as some persons seem to think it... [the student] will however... agree with me in thinking that if the bill be an organ of much importance,

the parts of which it is merely the commencement must be so too." The next year saw the first volume of *A History of British Birds,* a great scientific work moulded in the same pattern as the *Rapacious Birds* and illustrated with the same exquisite anatomical drawings. Yet MacGillivray's *British Birds* never achieved real popularity; his strict adherence to purely scientific and technical illustrations made the reading public—and the reviewers—shy of it as a work of reference, an attitude encouraged by the contemporaneous appearance of the first part of Yarrell's *History of British Birds,* written by an Englishman and illustrated in a manner calculated to attract the non-scientific ornithologist right at the opening of the era of the great Victorian naturalists.

MacGillivray as a scientist is well known, less so as an artist; his paintings in colour of British birds are as good as any others of the period and were highly praised by Audubon, but he did not see them published. Indeed, it was not until a selection appeared in the *Scottish Field* in 1958 that any were ever reproduced in colour. The climax of MacGillivray's career came in 1841 with his appointment to the chair of Civil and Natural History in Marischal College, Aberdeen, where he remained until his death in 1852. The two colleges were still ununited, for only in 1860 came the union which created the University of Aberdeen. Marischal College then stood alone among Scottish universities in the inclusion of Natural History as a necessary part of the Arts curriculum: even in King's College the subject was taught only in "occasional lectures" and although the chair of Natural Philosophy at King's was held by an eminent naturalist and author, the Rev. James Fleming (1785-1857), he did not teach natural history and worked purely as an amateur in that field until his appointment in 1845 as Professor of Natural Science in the New College, Edinburgh. Fleming is best known for his *History of British Animals* but Scottish ornithologists will recognise him as author of the chapter on zoology in M'Crie's *The Bass Rock* (1848).

As a lecturer MacGillivray became so popular that it is said that Professor John Stuart Blackie enrolled as one of his students. To quote Professor Traill (1906):

> "He taught zoology and geology in winter and botany in summer, and into it all he brought the same spirit of enquiry. There was no provision within the university, until many years after, for work in the laboratory; but MacGillivray delighted in excursions, to which he welcomed those who would come."

The open air was MacGillivray's laboratory, and he utilised it as none has done since. Formalised practical instruction in zoology came only in 1879 when Professor Cossar Ewart created a laboratory by clearing out a former storeroom.

Thomas Pennant, Gilbert White's correspondent, renowned as a zoologist and traveller, contributed little directly to Scottish ornithology, other than a few notes and pictures of the Ptarmigan and the Scottish Capercaillie, but probably performed a greater service by attracting attention to the Highlands and Islands, and also by commissioning the Rev. George Low to compile his *Fauna Orcadensis*, which however was not published until 1813, after the deaths of both Low and Pennant. Meanwhile in Shetland the Edmonstons were helping to keep the North Isles to the forefront of Scottish natural history with a long family tradition which culminated in the posthumous publication of *The Birds of Shetland* (1874) written by Dr Laurence Edmonston's son-in-law Henry Saxby.

In the early years of the nineteenth century ornithology became firmly established as an amateur study, though mainly at first among the landed gentry. Foremost amongst the earliest of these came Sir William Jardine (1800-74), a sportsman and landed proprietor, but nevertheless backed by a scientific training, for he had, along with MacGillivray, attended Professor Jameson's lectures, and also studied botany and comparative anatomy. Jardine became one of the most distinguished Scottish naturalists of his century, best known probably for his editorship of the 40 volume *Naturalist's Library;* he was also one of the editors of the *Magazine of Zoology and Botany* and, surprisingly, a severe critic in his review of MacGillivray's *British Birds*. Jardine set the fashion in ornithological exploration of the Scottish Highlands by travelling in 1834 as far as the north of Sutherland, then virtually unexplored, along with Prideaux John Selby, author of *Illustrations of British Ornithology* and Jardine's collaborator in other ornithological works. The third member of the party was James Wilson, the man who introduced Audubon to MacGillivray. The results of this expedition were published by Selby (1836) in a paper which forms the basis for all ornithological work in the north Highlands.

These early ornithologists were essentially skin and egg collectors and the ensuing twenty years saw a great rush to this El Dorado of rare species, which was soon to be as well known—to the detriment of the birds—as the North Isles. The Milner brothers were followed by Charles St John, whose name has outlived them all, although he was a poor ornithologist—all shooting and collecting everything. John Wolley, who at that time was studying medicine at Edinburgh University, was next in the field, primarily as an egg collector, but also, to the benefit of posterity, as an accurate and painstaking diarist (Newton 1864-1907). Wolley collected extensively in Caithness, Sutherland, Orkney and Shetland before

transferring his interests farther north, but it is only fair to say that he seemed genuinely anxious about the constant threat from all quarters to the larger birds of prey.

Colonel Henry Drummond (1814-96), grandson of the Duke of Athole, and who married the heiress of Seggieden and thereafter adopted the name of Drummond-Hay of Seggieden, was an outstanding example of the Victorian country gentleman naturalist, and became a distinguished botanist and ornithologist, at first overseas during his military career and later in his native Perthshire. Here he devoted much time and enthusiasm to the Perth Museum and to the Perthshire Society of Natural Science, under whose auspices the *Scottish Naturalist* began publication in 1871. Lt.-Col. Henry Drummond, as he then was, became the first president of the British Ornithologists' Union on its formation in 1858 and was, most appropriately, the last man known to have seen a Great Auk alive. Roughly contemporaneously, Robert Gray (1825-87) was becoming well known in the west, for although a native of Dunbar he spent much of his life in Glasgow, where he was employed on the staff of the City of Glasgow Bank. Gray was one of the founders of the Natural History Society of Glasgow, but is probpably best remembered as author of *The Birds of the West of Scotland* (1871), one of the early Scottish regional faunal works which is still useful for reference.

The scene was now set for a full regional cover of Scottish ornithological studies; the interest was sufficiently widespread, local natural history societies were flourishing as collectors of specimens and data, and there was one man who had the time, money and energy to take the lead. This was John A. Harvie-Brown of Dunipace (1844-1916), to the present generation undoubtedly the best known of the nineteenth century sportsman naturalists. Harvie-Brown was an indefatigable correspondent, his sheets of grey notepaper, headed with a motif of Swallows on telegraph wires beside a map of Larbert, finding their way to every country house in Scotland. He was also a voluminous writer of notes and papers over a period of half a century, but he is best remembered for the Scottish *Vertebrate Fauna* series of books which he compiled in collaboration with T. E. Buckley, the Rev. H. A. Macpherson and A. H. Evans.

The original plan had been for a series of books covering the whole country, but although volumes relating to nine of the Scottish Faunal Areas were published during Harvie-Brown's lifetime the set has never been completed. The first, *A Vertebrate Fauna of Sutherland, Caithness and West Cromarty,* was published in 1887 in collaboration with T. E. Buckley (1846-1902) who, although an Englishman, had

settled in Sutherland. But after the appearance of *A Vertebrate Fauna of the Tay Basin and Strathmore* (1906), with Harvie-Brown as sole author, his health began to deteriorate and a previously faultless memory to become impaired. Evans added *A Vertebrate Fauna of the Tweed Area* (1911) to the main series published in Edinburgh by David Douglas, while George Sim (1835-1908), an Aberdeenshire tailor who became well known as a naturalist and taxidermist in Aberdeen, filled the gap in the northeast with *The Vertebrate Fauna of Dee* (1903), published and printed in Aberdeen. Berwickshire had already been covered by George Muirhead (1845-1928) in his fine work *The Birds of Berwickshire* (1889) and Sir Hugh Gladstone (1878-1949) had done the same for Dumfries in *The Birds of Dumfriesshire* (1910) but the only subsequent volume in the direct Harvie-Brown tradition did not arrive until 1935 with *A Vertebrate Fauna of Forth* by the Misses Rintoul and Baxter. This book had originally been planned by William Evans (1851-1922), one of the most competent naturalists of his day and acknowledged authority on the fauna of the Forth area, but he died with the book unwritten and it was on the suggestion of Dr Eagle Clarke that the authors undertook it jointly.

Curiously, the nineteenth century did not produce a *Birds of Scotland,* but this was the golden age of the local naturalist and of the local natural history societies; throughout Scotland men like Thomas Edward (1814-86) the Banff shoemaker, one of the most energetic self-educated field naturalists the country has known, and Robert Service (1854-1911) the Solway naturalist, to mention only two, were examining and recording the fauna. Broadly speaking the nineteenth century ornithologists were regional recorders: in collecting records they necessarily collected birds. "The double-barrelled shotgun is your main reliance" is the opening sentence of a standard textbook on field ornithology (Coues 1890), advice which was to remain sound for several decades, but species studies were now beginning to appear, though at first distributional and historical only. Again Harvie-Brown led the way, with *The Capercaillie in Scotland* (1879) and a paper on "The Great Spotted Woodpecker in Scotland" (*Ann. Scot. Nat. Hist.* 1892: 4-17). Mention should also be made here of Symington Grieve's *The Great Auk* (1885) published when he was President of the Edinburgh Naturalists' Field Club.

The closing years of the century were to see a completely new development which began, as described elsewhere in this issue by Dr Eggeling, with the appointment of a special committee of the British Association to study bird migration at British lighthouses—yet once more at Harvie-Brown's

instigation—succeeded most opportunely by the appointment in 1888 of William Eagle Clarke (1853-1938) as Assistant in the Natural History Department of the Royal Scottish Museum. Previously Eagle Clarke had been Curator of Leeds Museum and had been one of the members of the British Association migration committee. His great influence as pioneer in the study of bird migration in Scotland cannot be over-estimated, and in recognition of these services he received the honorary degree of LL.D. from St Andrews University (not Aberdeen as stated by Lack—*Ibis* 101: 73).

Closely associated with Eagle Clarke were two outstanding and adventurous characters whose work on Fair Isle has been referred to by Dr Eggeling. These were Mary, Duchess of Bedford, and Surgeon Rear-Admiral John H. Stenhouse (1865-1931). The former made full use of her unusual ability as a field naturalist combined with more than usual opportunity for indulging in birdwatching in out-of-the-way places (Bedford 1938), and in recognition Eagle Clarke dedicated to her his *magnum opus Studies in Bird Migration* (1912). In the years preceding the first world war the Duchess of Bedford cruised extensively in northern waters in her steam yacht *Sapphire,* reaching as far as Jan Mayen. She visited Fair Isle nine times between 1909 and 1914, besides taking Dr Clarke there on other occasions, and also made extensive migration records on Barra and North Rona—the first ornithologist ashore there since Harvie-Brown's visit in 1887. Like many others she failed to land on Sule Stack, but published (Bedford 1914) a fine series of photographs of it. Later she became one of the pioneers of aviation and had flown in most parts of the world before her tragic disappearance in March 1937 while on a solo flight over the flooded fenlands.

Stenhouse was a doctor who graduated at Aberdeen University in 1886. He studied zoology under Professor Cossar Ewart and while in his third year joined one of the vessels of the Scottish sealing fleet on a spring trip to Newfoundland. Little wonder he joined the Navy immediately after graduation, and he lost no opportunity of observing and collecting birds wherever his service took him. On his retirement he settled in Edinburgh and spent the rest of his days actively engaged in ornithology at the Royal Scottish Museum and on his Fair Isle expeditions.

The logical corollary to the study of visible migration, by this time firmly established as ornithological practice, was some form of marking individual birds for subsequent identification. The simultaneous but independent origins of the two marking schemes in 1909 are described elsewhere in this issue by Sir Landsborough Thomson, originator of one of the schemes, and happily still very much alive, though

furth of his native Scotland. Landsborough Thomson's father, Sir John Arthur Thomson, was Professor of Natural History in Aberdeen and did much to popularise the study of his subject. He was an early exponent of the ecological concept of zoology, the seeds thus sown being well nurtured by his successor James Ritchie, author in 1920 of one of the finest books on Scotland ever written; and bearing fruit in the ecological studies for which Aberdeen University now has an established reputation.

Scotland lost several ornithologists of great promise in the 1914-18 war, among whom were Lewis N. G. Ramsay of Aberdeen, and a forerunner in bird ecology, Sydney E. Brock of Kirkliston, author in 1914 of an important though possibly not well known paper, "The ecological relations of bird-distribution" and of a second, published posthumously in 1921, on "Bird-associations in Scotland." Lewis Ramsay and Landsborough Thomson were university contemporaries and both became assistants in the Natural History Department at Aberdeen. It seems appropriate to place on record here—as has not been done previously except for incidental mention in a letter to *British Birds* (Thomson 1958)—the former existence of "The MacGillivray Society" and of its magazine *The Halcyon* (published in unique typewritten copy). The society was a private club of young Scottish field naturalists, especially ornithologists, in the period 1908-11. The total number of members was 16, of whom ten were ornithologists, with a nucleus in Aberdeen and a rather older group in and around Edinburgh. The main object of the society was the compilation and circulation among members of *The Halcyon,* edited by Landsborough Thomson assisted by Lewis Ramsay. This was the form of communication which kept members in touch with one another. It was to the ornithological members that Landsborough Thomson first turned for ringers for the Aberdeen University Bird Migration Enquiry. The function of the society and magazine appeared to have been fufilled when most of the members had reached the stage of belonging to recognised societies and of contributing to scientific journals, but the group did not lose its coherence and might have made a greater impact on Scottish ornithology if so many of its members had not lost their lives in the war.

When Eagle Clarke made his first trip to Fair Isle in 1905 he had with him a young assistant from the Royal Scottish Museum, Norman B. Kinnear (1882-1957), a great grandson of Sir William Jardine, and who became an internationally known ornithologist and in 1930 was knighted for his services to the British Museum. Frequent visitors to the R.S.M. were two young ladies from Fife who had been birdwatchers from

childhood and were so carried away by Eagle Clarke's enthusiasm for Fair Isle that they began in 1907 to visit the Isle of May with the idea of studying bird migration there. These were Leonora Jeffrey Rintoul (1878-1953) and Evelyn Vida Baxter (1879-1959), a working partnership affectionately known to everyone as 'the good ladies' which was to lead Scottish ornithology for the succeeding half-century and particularly in the period between the two world wars. From 1910 onwards they edited the "Report on Scottish Ornithology" in the *Annals of Scottish Natural History* (which in 1912 reverted to the original title of *Scottish Naturalist*), and in 1918 published their classic paper on bird migration in the *Ibis*, where attention was first drawn to the importance of migrational drift. In 1928 they completed *The Geographical Distribution and Status of Birds in Scotland*, a checklist to which subsequent amendments were regularly published, and in 1935 *A Vertebrate Fauna of Forth*. Their final work has been described as a landmark in Scottish ornithology, as indeed it was—*The Birds of Scotland*, a two-volume work and the first ever on the avifauna of the whole country, published in 1953. but alas just after the death of Miss Rintoul. In 1955 Miss Baxter had the honorary degree of LL.D. conferred upon her by Glasgow University.

Much of the early ornithological work in Scotland was carried out by individuals working on their own, though a measure of coordination was achieved through the influence of Harvie-Brown, Eagle Clarke and the group in Aberdeen, but in the 1930s, influenced possibly by the work of E. M. Nicholson in Oxford, came a marked trend towards closer cooperation in fieldwork in Scotland. In the formation of the Midlothian Ornithological Club in 1933 with George Waterston as the central figure can be traced a similarity to the MacGillivray Society, even to the publication of an important ecological paper by one of its members, Vernon van Someren (1936). The M.O.C. was however a private club, and has remained so, but it was by now felt that "a common meeting ground for all those interested in ornithology in Scotland would be of great value," so that early in 1936 a meeting was held in Edinburgh, attended by Miss Baxter, Miss Rintoul, H. F. D. Elder and George Waterston, where it was resolved that steps should be taken to found a national club. George undertook to be Honorary Secretary, and the first meeting of the newly formed Scottish Ornithologists' Club was held in Edinburgh on 14th January 1937, at which 64 out of a total of 80 members were present. Monthly meetings were thereafter held alternately in Edinburgh and Glasgow and the *Scottish Naturalist* was adopted as the official organ of the club. On the outbreak of war in 1939 meetings were suspended, although the club remained in

being with the Rev. Edward T. Vernon and Miss Elsie Macdonald as Interim Chairman and Secretary, but when George Waterston was invalided home from Germany in 1943 he immediately began to establish and maintain contact with many members who were on service.

Full activity was resumed after the cessation of hostilities. Professor V. C. Wynne-Edwards had come to the Natural History Department in Aberdeen and did much to revive interest in the north, with the subsequent formation of the Aberdeen branch of the club, but the first notable post-war occurrence was a conference held in Edinburgh in 1947 jointly between the B.O.U. and the S.O.C. This was the first occasion on which ornithologists had been able to meet together after the war and was attended by 46 members from 14 different countries in addition to those from the British Isles, presided over by Norman B. Kinnear. This meeting was so successful that it became the pattern for the S.O.C. "Conference" held annually in October. No one who was present is likely to forget the first of these, held in Aberdeen in 1948 in the lecture theatre of the Natural History Department, or the afternoon tea party at Culterty, Newburgh, to which all the members were invited by Dr and Mrs Edgar Smith. It would be pleasant to think that it was from this S.O.C. tea party that the idea of an Aberdeen University Field Station at Culterty first germinated in Dr Smith's mind.

George Waterston continued to act as Honorary Secretary, but as the club's membership increased so did the secretarial duties, and when in 1955 he was offered an appointment as part-time Scottish Representative of the Royal Society for the Protection of Birds the Council of the S.O.C. resolved to employ him as part-time Club Secretary. This arrangement lasted for five years, office accommodation being provided free of all charges by the National Trust for Scotland, but it soon became apparent that efficient organisation of bird protection in Scotland needed more than half of even a man of George's energies, and also a more spacious office; furthermore the N.T.S. was itself becoming pressed for office space. The club was therefore faced with the problem of finding both a new office and a new secretary. The latter was the easier to solve as George now had a wife, Irene, who was not only a competent secretary and ornithologist but was also looking for a part-time job. As the solution to the former, George himself put forward a proposal that it would be in the interests of both the R.S.P.B. and the S.O.C. for both organisations to have offices under the same roof and, further, stated that he thought there was a good possibility of obtaining a grant from a charitable organisation

for this purpose. The proposal received the wholehearted support of the Council, and particularly of the then President, Sir Charles G. Connell, whose enthusiasm and personal interest did much to bring the project to fruition.

The whole idea aroused great interest in Scottish natural history circles, so much so that in a very short time the offer of a substantial sum of money was received from an anonymous donor. Several houses in Edinburgh were viewed, among them 21 Regent Terrace, which was very suitable for conversion to offices with living quarters above, and finally on Monday 26th October 1959 The Scottish Centre for Ornithology and Bird Protection was officially opened by the Rt. Hon. the Earl of Wemyss and March. Here are the offices of the club, reference and lending libraries, and more recently the S.O.C. Bird Bookshop. The Fair Isle Bird Observatory Trust also has its headquarters here, and from another suite of offices the affairs of the R.S.P.B. in Scotland are administered by George and his assistant Michael Everett. A Scottish Branch of the R.S.P.B. formerly existed (from 1924 to 1927) but nothing on the present scale was done to organise bird protection north of the Border before the appointment of a salaried Scottish Representative.

Publication of the *Scottish Naturalist* was suspended in December 1939 and resumed in April 1948 under the editorship of Professor Wynne-Edwards, but the need for somewhere to publish local bird notes was made apparent by the appearance in 1950 of the *Edinburgh Bird Bulletin* edited by D. G. Andrew, followed in 1952 by J. A. Gibson's *Glasgow and West of Scotland Bird Bulletin.* The *Scottish Naturalist* remained the only national journal, but its light began to flicker in 1955—being finally extinguished in 1964—and in 1958 *Scottish Birds* was launched as the journal of the Scottish Ornithologists' Club, edited by Professor M. F. M. Meiklejohn until the end of 1961 and thereafter by Andrew T. Macmillan, the present editor; the two local bulletins merged into the club's journal.

Although it is inevitable with the passage of time and the vast increase in membership that some of the early pioneering spirit has disappeared, the club's primary function remains exactly as declared in 1937 by the founder President, Miss Baxter, "to provide a common meeting ground for all those interested in ornithology in Scotland," whether they be academic professionals or birdy amateurs.

In the academic field Aberdeen has led the Scottish universities in ornithological work, following the acquisition in 1957 of Culterty house and grounds at Newburgh as a field station for the Department of Natural History (Zoology). Culterty, it will be recalled, was formerly the home of Dr

and Mrs H. Edgar Smith, who kept a large waterfowl collection on the fresh and salt-water ponds in the grounds. Its situation on the Ythan estuary makes it an ideal centre for ecological studies, particularly on estuarine ducks and waders, such as are at present being undertaken together with population studies of Rooks in the Ythan valley and, further afield, of Fulmars on Eynhallow, Orkney, work which has continued unbroken since 1950. A fuller description of the research at Culterty is given by Dunnet *et al.* (1965).

Aberdeen University has also been associated with the Nature Conservancy in a longterm research project on Scottish Red Grouse which has been described by Jenkins *et al.* (1964). This began in 1956 as an enquiry financed by the Scottish Landowners' Federation and organised in his department by Professor Wynne-Edwards. At the end of the initial three-year period the work was considered of such importance that the Nature Conservancy agreed to finance it as a separate research unit, now known as the Unit of Grouse and Moorland Ecology, with headquarters at Blackhall, Banchory, and still directed by Professor Wynne-Edwards, with David Jenkins as Principal Scientific Officer. Dr Jenkins has recently been appointed Director of Research of the Nature Conservancy, Scotland, and is succeeded at Blackhall by Dr Adam Watson.

It is outwith the scope of this review to do more than mention the setting-up of the Nature Conservancy in 1949, but attention may be drawn to Dr W. J. Eggeling's account (1964) of the Conservancy's work, with particular reference to ornithology in Scotland. Birdwatchers are now adopting a broader approach to their subject and regarding the living bird in relation to its habitat and to other animals; in other words, as Dr Eggeling puts it, "More and more the intelligent birdwatcher is becoming an ecologist." Moreover, the birdwatcher is rapidly appreciating the need to be a conservationist too, and the formation in 1964 of the Scottish Wildlife Trust was welcomed by all. With Sir Charles Connell as Chairman, the Trust performs a similar function to the County Naturalists' Trusts in England, and is working in close association with the Nature Conservancy, the S.O.C. and the National Trust for Scotland. The need for this sort of movement has been made all the more urgent by human pressures on land use, not least of these being the tourist industry, and the stage has now been reached when the birdwatchers, as distinct from the shooters, are catered for as a recognised section of the Scottish tourist traffic, culminating in a single nest becoming the major tourist attraction in the Scottish Highlands—the Osprey's nest on Speyside, visited, under supervision of the R.S.P.B., by over

20,000 people in a season.

Vivat, crescat, floreat Ornithologia (Hartert 1922)!

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It is impracticable to quote the source of every piece of information used, but much has been gleaned from the *Scottish Naturalist* and the *Annals of Scottish Natural History* (1871-1964) and also Mullens and Swann (1917). Sir Landsborough Thomson kindly sent me notes on the Mac Gillivray Society, and George Waterston on the history of the S.O.C.

The division of Scotland into Faunal Areas on the basis of river basins and watersheds was originally worked out by Dr F. Buchanan White (1871); the boundaries, somewhat modified from his original description, are shown on the map in Baxter and Rintoul's *Birds of Scotland.*

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The Scottish bird observatories

W. J. EGGELING

The conception and genesis of the Scottish bird observatories was due to the imagination, organising ability and ingenuity of one man—George Waterston. It was he who was behind the establishment in 1934 of the Isle of May Bird Observatory—the first cooperatively manned migration study centre in Britain—and it was he again who was responsible for the founding of the Fair Isle Bird Observatory in 1948. These are still the only observatories in Scotland; they set a pattern which has been copied time and again, elsewhere.

To understand both the background against which the May observatory came into being, and the source of George Waterston's inspiration, it is necessary to go back to the investigation initiated by a Special Committee of the British Association for the Advancement of Science, appointed in 1880 as the result of preliminary work by J. A. Harvie-Brown and J. Cordeaux. Their suggestion was that, with the cooperation of lightkeepers, information of value to students of bird migration might be obtained from the chain of lighthouses around the British coast. The concept proved workable, organised observations were made from 1879 onwards, and the results were published regularly in a series of annual reports (British Association Migration Committee 1879-1904). Intimately concerned with this project and personally much attracted to migration problems was Dr William Eagle Clarke of the Royal Scottish Museum. So much was this the case that subsequent to the survey he spent over a year at

lighthouses and lightships, and on remote islands, concentrating on those places where migration was known either to be observable on a large scale or to be of more than usual interest.

It was as a result of acquaintance with Eagle Clarke and the stimulus of his exciting ornithological experiences on Fair Isle, Sule Skerry, the Flannans and St Kilda that the Misses E. V. Baxter and L. J. Rintoul, later to become famous as the authors of *The Birds of Scotland* (Baxter & Rintoul 1953), conceived the notion of a long-term study of migration on the Isle of May. Both had watched birds since childhood and they had already much experience behind them when, still in their twenties, they embarked in 1907 on the first of their annual spring and autumn pilgrimages to that island which were to continue, interrupted only by war, until 1933. This was the period of the collector—"what's hit's history; what's missed, mystery"—so they were armed not only with pencil, notebook and binoculars but also with shotgun, cartridges and the tools of the taxidermist. They were pioneers and they did a first-class job (Eggeling 1964).

In a notable paper, published in the *Ibis* in 1918 (Baxter & Rintoul 1918) 'the good ladies'—as they were afterwards to be referred to affectionately by so many—recorded their observations on the effect of easterly winds on autumn migration. They deduced that the direction of the wind has a great influence on the routes birds follow—and therefore on the species which reach our shores—and that deviation from the direct route is largely due to drift. The first of these conclusions was almost revolutionary, since there was then a general acceptance of Eagle Clarke's belief that migration was affected not so much by wind direction as by the general weather situation. Their second conclusion was the earliest expression of the concept of migrational drift.

The Isle of May Observatory

Just as Eagle Clarke by his enthusiasm had influenced Miss Baxter and Miss Rintoul, so these two in their turn, by their discoveries on the May, inspired George Waterston and a group of schoolboy companions, operating first as the Inverleith Field Club and later as the Midlothian Ornithological Club, to follow after them. The story of the early days of the I.F.C. and M.O.C., and of the start of the May observatory, has been sketched elsewhere (Eggeling 1960) but is worth repeating. As described by H. F. D. Elder, the first Honorary Secretary of the observatoy: "In the spring of 1929 George Waterston asked six of us who were interested in birds to meet at his house in Inverleith Terrace. We were all either still at, or had just left, the Edinburgh Academy, our average age being, I suppose, about eighteen. At that

meeting we agreed to start a club which would meet once a month at Inverleith Terrace to discuss birds*. Many names were proposed for the club but it was finally decided that we should call ourselves the Inverleith Field Club, after the area in which we held our meetings."

"From the beginning, the I.F.C. was as much a social club as a bird club. The New Year, spring, summer and autumn weekends were the highlights of the year, when we either camped out or, in winter, stayed at some hotel. Although ornithology was the order of the daytime, the sing-songs and so on in the evening were strong attractions of these weekends."

"By 1932-33, although a number of us had become more immersed than ever in the study of birds, others had found alternative hobbies and, whilst still retaining a general interest in ornithology, were not prepared to devote so much time to it as we were. Thus, by mutual agreement, certain of us started in March 1933 a second club, which we called the Midlothian Ornithological Club, with its sole object the study of birds; social attractions were to take a very secondary place. The M.O.C. was and still is a private and very personal club, membership being by invitation only. Unlike most clubs, its members pay no entrance fee, and there is no annual subscription."

"Some of the best places for birds in the Edinburgh area are the reservoirs and the coast, so it was natural that we should concentrate on such places, where during spring and autumn unusual birds might be seen. This led us to a particular interest in migration. The work of Miss Baxter and Miss Rintoul on the Isle of May was of course well known to us—our own first visits to it were those of Waterston and Elder in September 1932 and of a larger party the following autumn."

"About this time an article by W. B. Alexander appeared in *British Birds* describing the bird observatory on Heligoland, and R. M. Lockley was writing in *The Countryman* about his bird trap on Skokholm. We knew W.B. He had helped us already in many ways and when we suggested that it might be profitable for us to start an observatory on the Isle of May he was full of enthusiasm for the idea and promised to assist us in any way he could. Soon afterwards he visited Edinburgh to talk to the Royal Physical Society about Heligoland and he ended his lecture by explaining

*The original members included A. G. S. Bryson (now Honorary Treasurer of the British Ornithologists' Union), H. F. D. Elder, G. Waterston (now Scottish Representative of the Royal Society for the Protection of Birds, and an Honorary President of the Scottish Ornithologists' Club) and J. H. B. Munro (who from its inception has been the Honorary Treasurer of the May observatory).

what we had in mind. The reaction of the meeting was most encouraging: Dr Stephen, Keeper of the Natural History Department of the Royal Scottish Museum, volunteered his help, and Professor James Ritchie spoke strongly in favour of what was proposed."

"The stage was now set for detailed planning. There were two main hurdles to surmount: we needed permission to establish an observatory on the island, and funds to build a trap and furnish living quarters. Mr J. Glencorse Wakelin, Secretary of the Northern Lighthouse Board, was appoached and we remember with gratitude his kindness in obtaining permission for us to do what we wanted. Funds had next to be found. We had estimated that we would require at least £50 to buy materials to build the trap and to furnish the small coastguard house on the island which the Commissioners said we could use. We were greatly heartened when W.B.A. guaranteed us £25, if we were unable to raise the full sum necessary. As it transpired, we did not have to avail ourselves of this generous offer. An appeal circular was sent out to people in Scotland and beyond who were known by us to be interested in birds, and this met with an unexpectedly gratifying response. We raised £83 altogether, of which the M.O.C. themselves contributed £5, 11s, and we were now all set to go ahead."

"Materials were assembled and on 28th September 1934 W. B. Alexander, R. M. Lockley, E. V. Watson (who was later to describe the mosses of the island) and H. F. D. Elder landed on the Isle of May to start the observatory. R. M. Lockley had already assisted us to plan the trap and we were much pleased when he agreed to come north and help us build it. That first party can be proud of their work, for the Low Trap has stood till the present day without any major rebuilding. The observatory was a success from the start, the trapping garden functioning splendidly. In the spring of 1938 a second trap (the Top Trap) was erected in the sunk garden beside the main lighthouse, but it had only been in use for a few months when we suffered a crushing blow. During the autumn the international situation became acute, the island was taken over by the Admiralty, the observatory had to be closed down in September and it was not until after the war that we were allowed back. On 13th April 1946 an M.O.C. party returned to the island expecting to find little trace of the traps, but to our great delight all that they needed was repair."

"In pre-war days boat-hire was cheap and no great drain on our pockets and we had managed to keep the station running by charging observers 1/- a night to cover the maintenance of our headquarters. Now, however, costs had risen

steeply and without some form of subsidy it would clearly be an expensive business for observers to visit the island. The M.O.C. believed, however, that the Isle of May Observatory had proved its value for the study of bird migration, and felt that a special effort was justified to ensure its continuation. The club therefore approached the four Scottish Universities, suggesting that the observatory deserved their support and proposing that in future it should be run by a Joint Committee composed of representatives from each University, the M.O.C. and the Commissioners of Northern Lighthouses. The Universities and the Commissioners fell in with this proposal, the Universities agreed to make individual contributions towards the cost of running the observatory, and a Committee was nominated. Because we felt that all aspects of the island's natural history should be studied, not just the birds in isolation, the observatory was at this time renamed the Isle of May Bird Observatory and Field Station. When the observatory re-opened in 1946 the Commissioners allowed us to move our headquarters from the old coastguard house or Lookout to the much more comfortable and commodious Low Light, where it has been based ever since."

The Low Light is a comfortable residence with accommodation for six observers. It has a small and a large bedroom, a living-cum-dining room, a kitchen-cum-pantry, a bathroom and a store; bedding, cooking utensils, crockery, fuel, etc., are provided. Observers take their own food and do their own cooking. The present daily charge is 5s a person, and the boat trip from Pittenweem costs 15s each for the double journey.

The observatory is normally open from mid March to early November and is available for the use of any student of natural history. Full records are kept of all work done, and accounts of it are published. The most important daily task is to complete a census of the amount of bird movement taking place. During the migration seasons in particular, trapping occupies a lot of time. Continuing studies of the breeding birds, of the other animal populations, and of the plants of the island are another important aspect of the work of the station.

In 1956 the Commissioners of Northern Lighthouses entered into a 99-year agreement with the Nature Conservancy which resulted in the Isle of May becoming a National Nature Reserve. Although the Conservancy has ultimate responsibility for the management of the reserve the position of the observatory is fully safeguarded and it continues to be administered by the Bird Observatory and Field Station Committee. In addition to supervising the running of the

station the Committee act also as agents for the Conservancy in the management of the reserve.

The Fair Isle Observatory

The first warden of the Fair Isle Bird Observatory was Kenneth Williamson. As he has recounted in *Fair Isle and its Birds* (Williamson 1965), he and his wife went there in the spring of 1948 charged with the task of organising a hostel and research centre for the study of bird migration. In his own words: "We were not the first to find George Waterston's enthusiasm infectious, and the idea presented a challenge. But the story of the Fair Isle Bird Observatory does not begin here, nor do I regard myself in any true sense as its first director." With Fair Isle, as with the Isle of May, it was the pioneer work of Dr Eagle Clarke and his associates that inspired the conception of the observatory. Forty years earlier that great Scottish naturalist "had thought deeply about migration problems as he wandered through the tiny fields surrounding the white-washed crofts. He trained an islander, Jerome Wilson of Springfield, to hunt and work with him and... occasionally too he had the company of a kindred spirit, when the yacht *Sapphire* dropped anchor off Klingers Geo and Mary, Duchess of Bedford, and her maid-servant climbed the steep cliff path and installed themselves at the Pund."

Eagle Clarke's work culminated in 1912 with his *Studies in Bird Migration* (Clarke 1912), but he continued to be a frequent visitor to Fair Isle until 1921 when, in Williamson's words, "he felt he was getting too old for this strenuous game and he made a last visit to his fabulous bird isle in the company of a younger and more active man, Rear-Admiral James Hutton Stenhouse. They bothied in the Duchess's old cottage at Pund. George Stout of Field, who became to Stenhouse what Wilson had been to Clarke, said of this visit, 'They lived on bad food and good whisky for a fortnight!' During the next decade Stenhouse may be said to have wardened Fair Isle. In 1929 he too felt the advancing years and began to look for a successor; he found an eager one in George Waterston."

"George was not able to go to Fair Isle until the autumn of 1935, when he and A. G. S. Bryson stopped the northbound steamer off the South Harbour and were rowed ashore in an island boat. George made annual visits until 1939, by which time his great ambition was to establish at the isle an observatory for the trapping, ringing and study of migrant birds similar to the one which he and his friends had already started on the Isle of May."

"The war must have scotched thousands of ambitions, but at

least one burned more brightly throughout those barren years. George was captured in Crete in June 1941 and was a P.O.W. in Germany for the next two and a half years, during much of which he was a sick man. But he had ample time and leisure to think of Fair Isle and what ought to be done there to reap the best possible harvest from its great ornithological potentialities. He fired a fellow-prisoner, Ian Pitman, an Edinburgh lawyer, with his enthusiasm and ideas, and their plans gradually took shape. If George ever had misgivings as to the practicability of establishing a field research station in such an isolated corner of the British Isles, they probably disappeared for ever during the voyage when he was invalided home via Gothenburg in 1943, in an exchange of wounded officers arranged by the Swiss Red Cross. The liner was escorted northwards through Norwegian waters, and then headed west: at dawn there was a shout 'Land ahead!' and everyone who could rushed on deck for a first sight of the old country. To one man the experience was something more than just that—it was an omen, a promise of things to come. For the land was Sheep Craig, with Fair Isle beyond bathed in the soft light of an October morning."

"George Waterston bought Fair Isle from the then proprietor, Robert Bruce of Sumburgh, in 1948, and the bird observatory was launched as a public Trust with Sir Arthur Duncan as chairman, Ian Pitman as treasurer, and George as secretary. Grants of £3000 from the Pilgrim Trust and £1000 for scientific equipment from the Nature Conservancy, together with many private donations and the annual subscriptions of the 'Friends of Fair Isle,' helped to put the venture on its feet."

Kenneth Williamson planned and supervised the conversion of the former naval headquarters at North Haven into hostel and laboratory, and had charge of its scientific programme until late in 1956. Peter Davis, who previously had been warden of the bird observatories on Lundy and Skokholm, then took over until 1963, when he was succeeded by Roy Dennis, the present warden.

In 1954 the National Trust for Scotland acquired Fair Isle from George Waterston, but the operations of the observatory, which continues under the management of the Fair Isle Bird Observatory Trust, were not affected by the sale. In 1963 an agreement between the National Trust for Scotland and the Nature Conservancy underlined the exceptional natural history importance of Fair Isle and recognised it to have the same scientific status as a National Nature Reserve.

The Fair Isle Observatory hostel, open between 1st April and 30th November, can accommodate up to fourteen visitors at a time. The sleeping quarters are mainly single rooms,

but two have two beds and one has three; there is a large commonroom, a reference library and a laboratory. Meals are provided but visitors look after their own bedrooms and wash up after meals. The charge for board and accommodation is 25s a day for adults and 21s a day for persons under 21. Transport between Fair Isle and Shetland is by the island's mail boat *Good Shepherd* which runs twice a week in summer (May to September) and once a week in winter (October to April). The return fare is 21s 6d.

The present and the future

There has always been a friendly rivalry between the two Scottish bird observatories. Fair Isle is undoubtedly the better known nowadays, partly because it has a permanent warden, provides board accommodation and can hold more visitors, partly because of the glamour of its remoteness, partly because of the great number of bird rarities recorded from it. Nevertheless for observing migration the May takes pride of place, for a comparison by Dr David Lack of migration at Fair Isle, the May and Spurn Point in Yorkshire has shown (Lack 1960) that in providing opportunity to see the arrival of typical drift migrants—the night migrant chats, warblers and flycatchers—the May is most favoured of the three. This holds also for other types of migrants, except the vagrant rarities (Eggeling 1964).

Fair Isle (1890 acres) is a relatively large island, with extensive tracts of hill and moorland, high sea cliffs and stacks, and an inhabited village area with a considerable acreage of field and pasture. The May (140 acres) is small by comparison, and lacks many of Fair Isle's habitats, but it has the very great advantage for birdwatching that it can easily be covered thoroughly several times daily, so that day-to-day changes in the bird population can be assessed far more easily and accurately. Moreover, its natural history has been documented over a much longer period than that of Fair Isle, enabling fluctuations in its plant and breeding bird populations to be seen as part of a record extending back well over a century. The continuing study of these changes is a major objective of the field station's programme.

In regard to publications emanating from the two observatories, there can be no doubt at all of the pre-eminence of Fair Isle. In particular this has been due to the wide-ranging interests of the resident wardens, such as Kenneth Williamson's work on many different aspectes of migration and his species studies on the Oystercatcher, Fulmar, and Great and Arctic Skuas. The observatory has been responsible also for a number of valuable papers from persons who arrived as casual visitors to the island but became intrigued with some particular aspect of the observatory's work and then either

assisted directly with studies in the field or undertook to analyse data that had been collected. If Fair Isle has been a better training ground than the Isle of May for ringers and students of bird migration it is because a resident warden is always on the spot to guide and instruct them. Nevertheless there are many who claim that the May serves an equally valuable purpose in another way—by encouraging self-reliance, individual initiative and general resourcefulness. Perhaps it is fairest to say that the two observatories are complementary and that the work of neither should be viewed in isolation from that of the score or more other observatories which are now in operation—following the Scottish lead—around the coast of Great Britain and Ireland.

This is not the place to enlarge in detail on the activities of bird observatories or on their especial contribution to ornithology. A general appraisal was made by Kenneth Williamson in a paper submitted to the Twelfth International Ornithological Congress at Helsinki in 1958 (Williamson 1960) which considers the work of the British bird observatories as a whole—but especially that on Fair Isle and the Isle of May—as it relates to field work, migration theory, field taxonomy and the laboratory examination of trapped birds. Although now slightly out of date and in need of amplification this paper still gives a good picture of the scope of study and accomplishments of the coastal observatories.

As yet there are no recognised inland observatories or migration observation points in Scotland, although sporadic records from a variety of places inland suggest that continuous or regular observations there—and especially perhaps both in the higher passes and in the lower straths and valleys which traverse the mainland—would add materially to our knowledge of cross-country seasonal movement, particularly if they could be combined with the radar observations to which, ideally, for maximum profit, all observatory recording ought now to be linked.

Equally, there can be no doubt that further recording from places like North Rona and St Kilda (from where a considerable amount of information is already available as a result of recent observations by the Nature Conservancy) and from Lewis and the Uists could fill gaps in our picture of migration up, down and across the west coast of Scotland. Although difficulties of access and accommodation make this at present impractical for most of the outlying islands, even a 3-5 year period of observation covering the migration seasons at one of these centres would be well worth while, so that no opportunity which might make this possible should be let slip. Again—and this needs only the cooperative effort of a small group of enthusiasts, based locally, to fulfil the

particular requirement—there is wide scope for observing in detail on the coasts of East Lothian and eastern Fife (especially perhaps at Fife Ness) the autumn arrival of all those drift migrants from the continent that reach the Firth of Forth without making a landfall on the Isle of May, but which alight instead on the mainland shore either north or south of it. Here is a challenge for a modern successor to the I.F.C. and M.O.C.—to a fresh alphabetic combination making new Scottish ornithological history.

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Bird ringing in Scotland

A. LANDSBOROUGH THOMSON

It is usual to date scientific bird-ringing from 1899, when Mortensen in Denmark was the first to use rings with an adequate address and individual numbers. The method was thereafter adopted in other countries, Germany and Hungary being early in the field, but it was not until 1909 that there were important developments in the British Isles. In various countries there had been pioneers who used cruder methods, both before and after Mortensen's lead, and the first enterprise of the kind seems to have been an English one starting in 1891—the ringing of young Woodcock on the Northumberland estates by Lord William Percy. His rings bore only 'N' and the year; the ducal initial proved not ineffective as an address, in the case of a bird shot as game, and the date sufficed where species, age and place were constant.

Probably the first ringed bird ever to be recovered in Scotland was one of these Woodcock, an 'N 1903' bird reported from Angus in November of the same year (Percy 1909). The first from abroad seems to have been a Starling ringed as young in Denmark in 1904 and recovered at Biel, Prestonkirk, East Lothian, early in March 1906 (Mortensen 1907).

Ringing in Scotland began with two pioneer undertakings in which inadequate methods were used. The first was by an

Englishman. J. H. Gurney, best known as a Norfolk naturalist but also making a special study of the Gannet at its Scottish breeding places. He wrote a book on the species; and his personal book-plate bears a Gannet *volant*, with the Bass Rock behind (reproduced in *British Birds* 16: 243). In 1904 he got the principal lightkeeper on the Bass Rock, John Laidlaw, to ring 40 young and 52 adult Gannets there (Gurney 1904). His rings were inscribed simply '1904 BASS ROCK,' which in fact gave most of the data required in such a limited enterprise. It was probably also adequate as an address for the lighthouse, but fell short in not being obviously so. Two local recoveries shortly afterwards were the only result (Gurney 1913, p. 424 footnote).

In the winter of 1906-07, as recorded by Harvie-Brown (1907), Richard Tomlinson ringed 71 trapped Starlings at Musselburgh, Midlothian, where he was living in retirement. The rings were serially numbered from '1' upwards but, it seems, bore no address; this precluded recoveries from being notified except in the press or by people aware of the enterprise. So far as known, none came to light, except that one can infer from the note that 42 of the birds 'repeated,' two of them twice, during the trapping period. Later Tomlinson joined my scheme.

The year 1909 saw the simultaneous and independent launching of two major ringing schemes in the British Isles. Neither promoter knew of the other's plans until arrangements were far advanced, and both schemes were announced in the same issue of *British Birds* (vol. 3, no. 1). One scheme was launched in association with that journal by its editor, H. F. Witherby, and eventually developed into the British national scheme, of which more will be said later in a Scottish context. The other was initiated by myself, as the 'Aberdeen University Bird-Migration Inquiry,' and with its history this paper is largely concerned. The account is necessarily a personal reminiscence, so a somewhat egocentric narrative may perhaps be excused.

As a youth in September 1908, I was fortunate in being able to visit Rossitten and Heligoland. On the latter there was at that time no resident ornithologist, but at the former—in what was then East Prussia—there was the famous Vogelwarte of the Deutsche Ornithologische Gesellschaft. The exhibits of the ringing work centred on this observatory fired my imagination; notably there were the recoveries of Hooded Crows netted on autumn migration at Rossitten itself, and of White Storks ringed as nestlings over a wider area. From the Director, Dr J. Thienemann, I learnt much about the methods and received specimen rings. Thus I came home resolved to start a ringing scheme in Scotland.

That I was, from the following year, able to operate such a scheme in the University of Aberdeen from the lowly station of a first-year undergraduate was due to the support of my father, Professor (later Sir) J. Arthur Thomson, in the Regius Chair of Natural History (incidentally, this had been MacGillivray's chair; and it is now occupied by the current President of the British Ornithologists' Union). This circumstance gave me official cover, a working corner in the Department, and a ready source of wise advice. It also secured a grant from the Carnegie Trustees for working expenses; these were trivial by present standards, even although rings were issued without charge.

After some experimental beginnings, the seven sizes of aluminium rings were made by a small firm in Halifax; but how this came about is now forgotten. The four larger sizes had clasps on the Rossitten pattern—two unequal ends projected outwards from the incomplete circle; the longer was folded over the shorter and eventually the three thicknesses could be pressed together with pliers. These sizes also had their edges turned outwards as flanges. The rings carried a serial number and the address 'ABERDEEN UNIVERSITY' (the second word contracted to 'UNIV.' on the smallest size). This was both short and obviously adequate; it also implied a scientific purpose that invited report. Witherby often expressed his envy.

A base having been secured and equipment provided, the next step was to deploy a field force. Happily the nucleus of this existed in the MacGillivray Society, a private natural history club, predominantly ornithological, which had been formed by some of us in Aberdeen as schoolboys and had taken in a slightly older group in Edinburgh, with later a few others elsewhere. This club thus had a part in the beginnings of Scottish ringing not unlike that played, as recounted elsewhere in this issue, by the Inverleith Bird (later Midlothian Ornithological) Club of a subsequent generation in the origins of Scottish observatories. This nucleus was quickly joined by others, including two young women in Fife who were destined to become leaders in Scottish ornithology, Evelyn Baxter and Leonora Rintoul.

The inception of the scheme was widely noticed in the daily press, and this brought further offers of help; eventually about two hundred ringers cooperated. Not all of these were in Scotland, a few being in England or Ireland. Correspondingly, Witherby was of course free to operate in Scotland; to use an idiom of a later era, no Tartan Curtain separated the two schemes.

It was inevitable that publicity should also elicit some less helpful reactions, especially from the more irascible

types of habitual objector. One semi-literate correspondent from Middlesbrough concluded a vituperative tirade with the exhortation: "Ring yourself and shut up!" On a different plane were the apprehensions of some bird lovers about possible harm to the birds. On this aspect I had a sympathetic letter from Lewis Bonhote, on behalf of the Royal Society for the Protection of Birds, and was able to satisfy him that it was well under control.

These were exciting days. Ringing had introduced a new dimension into bird study. My own personal experience was mainly with Lewis Ramsay and Arthur Davidson, two MacGillivray Society members who lost their lives a few years later. First it was the chicks and nestlings. Then in the autumn it was catching birds on the seashore by dazzling them with bicycle lamps—until the coastguards stopped us! And when winter came we tried out various methods of trapping birds in our gardens. These things, now familiar to many, were then quite novel in our country.

In the Department there was the further interest of seeing the ringing schedules come in—and then the thrill of the first recoveries. The earliest report from abroad was of a Wigeon caught in a decoy in the Netherlands on 3rd September 1909; it had been ringed as one of a brood of ducklings in Sutherland that summer. The method was working well; letters addressed to the University were duly passed to the Department by the administrative office. Sometimes, however, reports reached us through the press or the police; occasionally they were addressed to the Lord Provost of the City—once as "Senor Alcalde d'Alberdeen." The well known ornithologist of Oporto, W. C. Tait, was assiduous in bringing Portuguese recoveries to our notice.

Some early recoveries of particular note were published in two papers, the first of which was primarily a general discussion of the marking method—its history, its application, and the hopes that were entertained for its results (Thomson 1911a). These early records included Aberdeenshire Lapwings from Ireland and Portugal, a Song Thrush from Portugal, a Guillemot from Sweden, Scottish-wintering Starlings from Arctic Norway in summer, and Swallows returning to the same nesting place in the following year (Thomson 1911b). These were the high spots.

A comprehensive list was given in a First Interim Report, running through the *Scottish Naturalist* in seven instalments (Thomson 1912-13). This sorely tried the patience of the editors, as it followed the thoroughness of the German model of that time in giving full particulars of every recovery, however trivial. It did, however, serve the purpose of presenting an initial complete sample of the data that the method

would produce. A Second Interim Report covered the results for 1912-14 (Thomson 1915); this was compressed by another hand from the material that I had put together before going on war service. By this time the scheme was fading out, although my sister (Maribel Thomson, herself a zoologist) kept the headquarters work going on a diminishing scale, and dealt with the reports of recoveries that continued to come in after ringing had virtually ceased. The last record was in fact as late as 1924, an Aberdeenshire Lapwing recovered in Ireland in the twelfth year of its life.

After the war, a final report was published in the *Ibis* (Thomson 1921). This recorded that 27,802 birds had been ringed under the scheme, which was about a third of the total ringed for *British Birds* in the same effective period. The largest species totals were: Song Thrush 3770, Lapwing 3142, Blackbird 2641, Starling 1900, Common Tern 1352, Robin 1206, Swallow 1198, Black-headed Gull 1150, House Sparrow 1041, and Greenfinch 1021. The report also recorded that 879 ringed birds had been recovered (two others were recovered too late for inclusion—Thomson 1924), and it then presented analyses of the data for eight species; of these the Lapwing yielded the most valuable results, with 63 recoveries, mostly from a distance. Brief summaries of the data for a further 34 species followed, and 11 others were mentioned as having yielded one or two recoveries of no significance. The report ended with conclusions both about migration and about the ringing method. It may be added that the data for some species have since been put to further use, combined for analysis with those of the other scheme (at the Tring headquarters of which all the recovery cards have now been deposited).

From 1919 onwards, bird-ringing in Scotland has been virtually the Scottish aspect of ringing under what has become the British national scheme. To round off the personal reminiscence: my own part in this was at first to prepare occasional analytical papers for *British Birds;* but when Witherby handed over the scheme to the British Trust for Ornithology in 1937 one of his conditions was that I should be chairman of the directing committee—a position held until 1965. The scheme has a headquarters staff at Tring whose salaries are mainly provided by the Nature Conservancy; and its rings now bear the address 'BRIT. MUSEUM LONDON SW7,' a shorter version of the original 'BRITISH MUSEUM NAT. HIST. LONDON.'

Meanwhile, however, there was a purely Scottish enterprise, or series of enterprises, for ringing Red Grouse; and in this work the University of Aberdeen has again been a focal point. The beginnings are slightly obscure, but it was

apparently from 1932 (Anon. 1932) and under the sponsorship of the Scottish Landowners' Federation that Professor James Ritchie, the new incumbent in the Natural History Department, directed a scheme in which rings marked 'ABERDEEN UNIVERSITY' were used. In 1936 Ritchie moved to the Chair of Natural History at Edinburgh; but he retained the direction of what came to be called 'The Grouse Migration Enquiry,' and rings marked 'EDINBURGH UNIVERSITY' were brought into use. Some conclusions were given in a report published in the *Field* in 1938 (anonymously, but apparently emanating from the Federation). At that time 130 estates all over Scotland, and 21 elsewhere, were taking part in the ringing. The work continued until war intervened in 1939.

Ringing of Red Grouse was resumed in 1956 under a scheme once more based on the University of Aberdeen and sponsored by the Scottish Landowners' Federation; the work was, and remains, under the general supervision of Professor V. C. Wynne-Edwards and the immediate direction of Dr David Jenkins (succeeded within the last few months by Dr Adam Watson), with field headquarters first in Glen Esk (Angus) and now at Banchory (Kincardineshire). The project has an intensive side, comprising continuous population and behaviour studies on particular estates and with ringing as merely one of its various methods; in 1959 this was taken over by the Nature Conservancy as a Unit of Grouse and Moorland Ecology based on the University.

The extensive side of the project was the ringing of Red Grouse all over Scotland. This continued under the sponsorship of the Federation until it was wound up, apart from recoveries still to come, in 1962. In all 13,336 rings were used and the recoveries (1246 to the end of 1964) are summarised in one published paper (Jenkins, Watson & Miller 1963) and another now in the press. At first No. 3 rings of the British national scheme were used; but from 1958 onwards special rings marked 'Inform ABERDEEN UNIVERSITY' have taken their place. The latter are still being used in the intensive programme in Kincardineshire, as are also coloured plastic back-tabs on birds caught in autumn (D. Jenkins *in litt.*).

Finally, something may be said (with the help of Robert Spencer) about the Scottish activities of the British national scheme at the present time. At the close of 1963 this scheme had 70 ringers in Scotland (Spencer 1964). In proportion to the population this is rather less, but not strikingly less, than the number in England and Wales. The main concentrations of Scottish ringers are, as of old, in Midlothian and Aberdeenshire; Shetland comes next. The chief centres of ringing work are the bird observatories on Fair Isle and on the Isle of May, the subject of another paper in this issue.

The University of Aberdeen is again well to the fore, with long-term intensive studies of such species as Starling, Rook, Fulmar, Eider and Shelduck; a key centre for ringing has been its wildfowl research station at Culterty on the estuary of the Ythan. It was near that same estuary that so many of our own birds were ringed in 1909-14; and it was on it too that the late Betty Garden more recently ringed so many ducks on behalf of the Wildfowl Trust, providing a valuable northern component in a project heavily overweighted towards the south.

The Midlothian Ornithological Club has over the years been responsible for a vast amount of ringing of tern species at colonies on the Firth of Forth. And in the last couple of years a North Solway Ringing Group, based on Dumfriesshire has been notably active in ringing in the southwest.

In Scotland as a whole, however, ringers tend to be widely scattered; and the lack of personal contact tells against recruitment, as well as slowing down the spread of new techniques. On the other hand, the numbers of Scottish ringers are reinforced nearly every year by visiting parties from England, whose objective is usually the great seabird breeding stations; and twice, recently, parties from Northern Ireland have done good work on Ailsa Craig. Also in recent years, as the result of a special drive to ring Sand Martins in large numbers, English ringers have come north in search of further colonies of that species.

Passerine migrants and seabird chicks have naturally bulked largely in Scottish ringing, but neither of these categories is peculiar to the country. There are, of course, a few species that are not available for ringing elsewhere in the British Isles; for most of them the numbers ringed have been too small to produce recovery data worthy of analysis, but two exceptions may be mentioned. Hen Harrier chicks have been ringed mainly in Orkney (through the cooperation of E. Balfour, the representative of the R.S.P.B.), and it has been shown that at least in the first year of life, some remain there during the winter while others become distributed over the mainland of Scotland (Thomson 1958). Several thousands of Great Skua chicks have been ringed in Shetland, and there are well over a hundred recovery records; the localities of these range from the coast of New England to far inland in western Russia, and from well above the Arctic Circle in W. Greenland to the coast of North Africa (Thomson 1966). It seems not inappropriate that this most recently published analysis of British ringing data should relate to a species that many members of this year's International Ornithological Congress will be seeing at its breeding grounds, often for the first time, during the S.O.C.

Bird-Islands Study Cruise round Scotland.

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Scottish bird photographers

C. K. MYLNE

(Plates 13 - 24)

The aim of this paper is to review generally the photography of Scottish birds and to concentrate particularly on the work of those who are active today. To define a Scottish bird photographer is impossible. We shall include many 'aliens' who have worked in Scotland, but we have deliberately selected for publication only pictures of typical Scottish species taken by photographers now living in Scotland. All are active in the field today, with two exceptions, Charles Kirk, one of the pioneers, whose early photographs are as good as many being taken today, and Ian Thomson, who produced consistently fine pictures of many Scottish species in the old style of bird portrait. The rest have been picked as a representative selection of styles, subjects and

PLATE 13. Common Gull, "Kilchoan", 1912.

Photograph by Charles Kirk

PLATE 14. Cock Wheatear, Isle of Mull, June 1965.
Photograph by William S. Paton

PLATE 15. Common Sandpiper, Isle of Mull, June 1965.
Photograph by William S. Paton

PLATE 16. Hedge Sparrow, Berwickshire, May 1964. *Photograph by Sidney J. Clarke*

PLATE 17. Black-headed Gull, Perthshire, May 1964. *Photograph by Nigel G. Charles*

PLATE 18. Hooded Crow, South Uist, 1964. *Photograph by David Stephen*

PLATE 19. Golden Eagle; adult arriving home with a twig, Argyll, May 1952.
Photograph by Charles E. Palmar

PLATE 20. Oystercatchers, Hilbre Island, Cheshire, October 1959. *Photograph by J. Edelsten*

PLATE 21. Immature Gannet, Ailsa Craig, 1964. *Photograph by David Stephen*

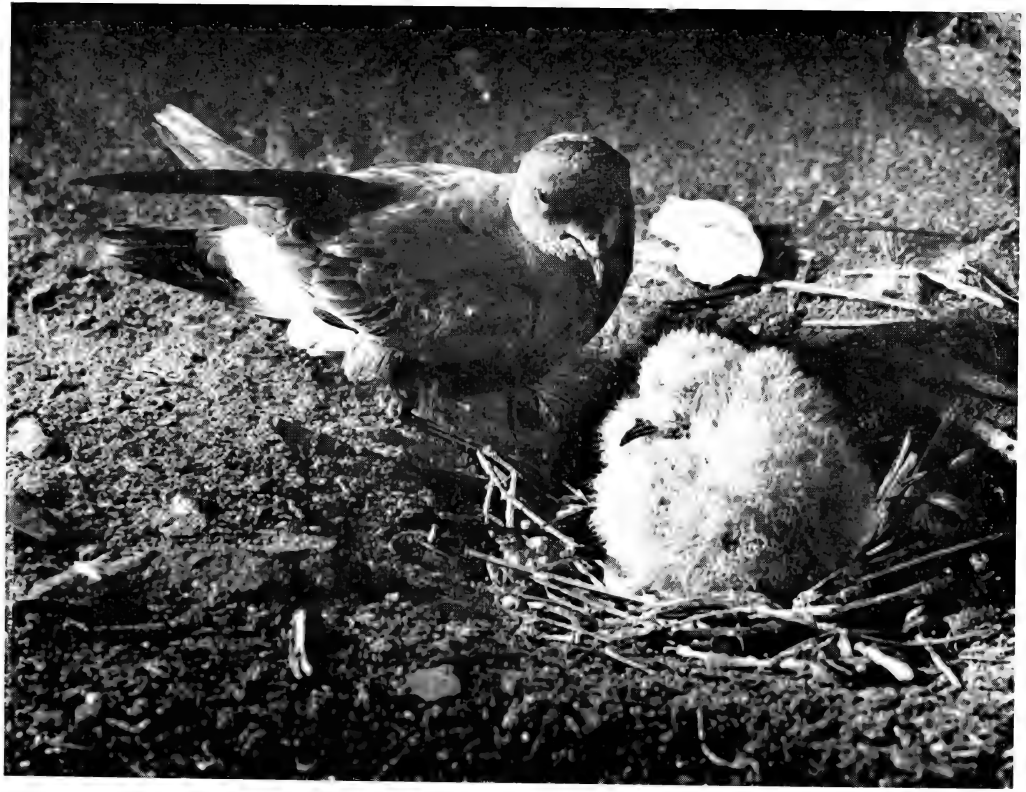

PLATE 22. Storm Petrel, nesting on the floor of a tunnel in a prehistoric ruin, Shetland, August 1964.
Photograph by Dennis Coutts

PLATE 23. Female Eider, Hascosay, Shetland, June 1953. *Photograph by Ian M. Thomson*

PLATE 24. Black-throated Diver, Argyll, May 1952.
Photograph by Charles E. Palmar

species which will, we hope, show that bird photography in Scotland is in the hands of an active and vigorous band of enthusiasts. We have made no attempt to be comprehensive and hope therefore that no apology is needed to the many whose work could well have been included.

Nature photography has been revolutionised by the invention of fast emulsions for black-and-white film, and of colour materials of reasonable speed with a fine enough grain to stand considerable enlargement by projection on a screen or printing on paper. The miniature negative can now produce top-grade results and the single-lens reflex camera makes the use of the now comparatively inexpensive telephoto lenses quite straightforward. As a result there are thousands of people who can, and hundreds who do, take bird photographs. Standards however have risen too and the art of bird photography is still as demanding as ever. Many would still argue that for a true bird photographer a larger format than 35mm is still essential. Others disprove this by their results. The best recent exposition of the case for miniature bird photography is by a Scot, the late V. D. van Someren, in the final chapter of his book *A Bird Watcher in Kenya* (Oliver & Boyd 1958). His illustrations, as well as some of those shown here, prove that the small format can produce excellent results in black-and-white photography, but, as all serious workers will emphasise, the greatest care is needed at every stage. To produce exhibition prints from 35mm negatives is an art in itself. Black-and-white photography therefore perhaps more than ever before demands that the photographer should do his own darkroom work if he wishes to achieve high quality enlargements.

Colour is a different story. To take good transparencies is now within the reach of everyone who can afford the equipment and who is prepared to learn the camera techniques. Trade processing is standard and many colour emulsions cannot be processed at home. For colour therefore the definition of bird photographer has changed and throws far more emphasis on knowledge of the subject and the field techniques used. It is a hobby now open to almost any owner of good equipment, and yet the number of really competent bird photographers remains comparatively small. We do not pretend to be able to cover them all, but will be delighted if this article stimulates a few more to prove themselves in public.

Scotland has long been the happy hunting-ground of nature photographers, and it is revealing as well as gratifying to see how many of the great names of bird photography have chosen to come north of the border to do some

of their best work. Any list is bound to be arbitrary and to omit many who could equally well claim to have found the challenge of Scottish birds their springboard to success, but certain names must be mentioned. In the many many books on the subject certain pictures will always stand out as classics of their kind. A glance through the pages of the compilation by Eric Hosking and Harold Lowes on *Masterpieces of Bird Photography* (Collins 1947) will show how often the stimulus to produce such classics has been provided by Scottish species, most often in the Highland setting.

In the 1890s the Kearton brothers, Richard and Cherry, started the whole process which put Britain in the lead in nature photography. At first, when equipment was almost impossibly difficult, they realised the advantages of situations like those offered by the Gannet colonies of the Bass Rock and Ailsa Craig. The Keartons pioneered bird photography in the Hebrides, in Orkney and in Shetland. They voted Noss in 1900 "a perfect sea-fowl paradise," and they took splendid action shots of skuas knocking people's hats off on Hermaness. At Muckle Flugga it is interesting to note how they recorded "a few fulmar petrels flying round the cliffs" as an exciting new species. It seems surprising with so many common species to start on how the early pioneers launched straight into the most challenging subjects Scotland could offer. One of the Keartons' earliest books, *With Nature and a Camera* (Cassell 1898), put St Kilda on the photographic map and stimulated the steady stream of ornithologists and photographers who have come under its spell. Oliver Pike was one of the first to follow in their footsteps, realising its potentialities for his 'bioscope.' In *Nature and my Ciné Camera* (Focal Press 1946) he describes his visits to St Kilda in graphic detail. In 1908 he tackled a Fulmar cliff, running incredible risks with the help of the islanders, heaving bulky equipment to the most difficult places and nearly losing the lot when the weather changed for the worse. In 1910 he achieved the almost impossible by climbing the sheer 600 ft cliffs of Stac Lee to film the Gannets with camera equipment which most of us now would hesitate to carry on the flat. It is as much a tribute to the cragsmen of St Kilda as to this intrepid photographer from Middlesex.

Another pioneer was R. B. Lodge from Lincolnshire who, in 1907, was one of the first to work on the Golden Eagle. Recently an enquiry at the B.B.C. Natural History Unit in Bristol disclosed that there were a hundred feet of ciné film on the Golden Eagle for every one on House Sparrows. As all nature photography is a challenge it is perhaps not surprising that the most difficult subjects of all appeal to the experts. In 1909 H. B. Macpherson, one of our first Scottish

bird photographers, published his book *The Home-Life of a Golden Eagle* (Witherby 1909) and set the ball rolling. It makes exciting reading and he communicates the thrill of achievement in his story of how he obtained what was perhaps the first photograph ever taken of an eagle at the nest. After concealing his camera at the eyrie and watching the bird return, he stalked back unseen to the point only a few yards from the sitting bird to press the bulb. In stretching to reach it he nearly overbalanced, but the exposure was made just before the bird flew off. Since then a host of others have followed—A. J. Rooker Roberts in 1913 with his classic picture of the pair at the nest, and notably Arthur Brook in 1924-26. He illustrated H. A. Gilbert's book *The Secrets of the Eagle and Other Rare Birds* (Arrowsmith 1925).

Amongst the eagle hunters have been some of our earliest and best Scottish photographers. Seton Gordon is probably the best known. There is half a lifetime's experience in his *Days with the Golden Eagle* (Williams & Norgate 1927). His great knowledge of Highland natural history from his homes in Aviemore and then in Skye, and his many illustrated books and articles, have earned him an international reputation—and the C.B.E. in 1939. More recently C. E. Palmar, since 1949 Curator of Natural History at the Art Galleries and Museum at Kelvingrove, Glasgow, has pursued an ambition to make a complete photographic life history on colour film of the Golden Eagle. This work led him, like Seton Gordon, to do extensive fieldwork on the species, over 14 consecutive years, and he joined forces with Leslie Brown and Adam Watson to work on the census which in 1955 concluded that there were between 250 and 300 breeding pairs in Scotland.

From the start Palmar has insisted on doing his own darkroom work and has therefore achieved the high standard of print production which won him his A.R.P.S. in 1948. He took the first picture of a wild bird to be published in *Picture Post* before the war, and in 1954 his eagle photographs were published in the *National Geographic Magazine*. The flight picture (pl. 19) is selected not just because it is different from the many eagle portraits taken at the nest; but because, by pressing the button as the bird swept up to the nest with talons lowered for the landing and carrying a stick in its massive bill, he has managed to convey something of the thrill of being in a hide at close quarters at such a moment. It is one of those pictures which tell everything—the setting, the nest site, the size of the bird, the power of its flight, with the protruding 'thumbs' and upswept primaries. The slight blur on the feather detail of the back, wings and tail may not please the purist

but it does convey a wonderful sense of movement in the subject which the still photographer seldom has the chance to achieve. Perhaps it is not surprising that having mastered the art of taking such excellent portraits as this and the Black-throated Diver (pl. 24) Charles Palmar should have moved on to ciné work, his film "Highland Heronry" winning joint first prize in the 1963 B.B.C. film competition.

Both J. E. Ruxton, a Scot who worked as a bank manager mostly in Northumberland, and the late Ian M. Thomson, a Harley Street dentist, spent precious holiday weeks every year in the Highlands specialising on their favourite species —as often as not the divers—and both eventually settled in Scotland. Ruxton, with an avowedly aesthetic approach, concentrated on woodland birds, several of which have been portrayed in this journal (*Scot. Birds* 1: 381, 447). Thomson's Eider Duck (pl. 23) is typical of his best work, and although an easy species he captures the character of the bird to perfection. His book *Birds from the Hide* (Black 1933) covers many other Scottish species.

Apart from the challenge of new and rare species and the excuse for a Highland holiday, there are other factors in Scotland that appeal to bird photographers. The countryside has remained relatively unspoiled in many parts of the Highlands and provides a feature that is becoming increasingly rare in Britain—a wild and natural background. The knowledge of local people often saves days of labour, and the helpfulness of many who work on the land and know their wildlife has been repeatedly acknowledged. The open landscape and freedom from disturbance have attracted many to the Northern Isles. One of the early visitors to Shetland was Ralph Chislett as can be gleaned from the title of his book *Northward Ho!—For Birds* (Country Life 1933). Other famous Yorkshiremen came north too, like Tom Fowler and Harold Lowes who were there in 1933 to photograph the Whimbrel, which was not to be found on their native moors; and W. W. Nicholas and G. K. Yeates who also worked extensively in Scotland. Walter Higham from Lancashire, John Markham and Eric Hosking from London, G. B. Keary from Manchester, Stuart Smith from Leeds, and H. G. Wagstaff from Coventry have all done outstanding work in Scotland. The same species tend to crop up again and again—the divers, the predators, the Scottish specialities. John Markham's avowed favourites were Dotterel and Greenshank, both also brilliantly covered by Eric Hosking. Stuart Smith concentrated first on the Crested Tit, Keary on the Capercaillie, C. W. R. Knight on the birds of prey. H. Willford from the Isle of Wight did some of his best work in the Northern Isles, and in recent years Harold Auger of Lincoln has done some exceptional work on Shetland species.

Photography has played a major part in bringing nature before the public and in creating an appreciation of the value and the aesthetic appeal of wildlife. The conservation movement in Britain has made striking headway since nature was well illustrated. Just how much public opinion has been changed, and how effective this visual education has been, can be gauged from looking back at the publications of 50, or worse still, 100 years ago. Standing out like a pointer to the future was the remarkable periodical *Wild Life* which first appeared in 1913 under the editorship of Douglas English with a striking photograph of a Scottish wildcat on the cover. Until 1918 it provided the market and therefore the stimulus for many nature photographers, though its contributors would have gasped at the brilliance and technical perfection of the coloured equivalents of today, such as *Animals* and now *Birds*. They were however in a better position to see the first impact of photography, and the editorial of Vol. 1 No. 1 claims full credit for the beginning of the revolution in nature study for the photographers. "It is not too much to say that our knowledge of British Birds has doubled within the past decade and that this duplication of knowledge has been due not to the ornithological societies, not to the museums, least of all to the collectors, but to the invaluable work accomplished by a small band of nature photographers since in the early nineties Lodge, King and the Keartons pointed out the way."

In the same volume (pp. 322-324) was an early example of the use of photography to establish a doubtful bird record, that of an aberrant Gannet on the Bass Rock. Here is the beginning of the new trend towards a more scientific attitude towards fieldwork, a major step away from the era of collecting. "There is no doubt," writes Riley Fortune, the author of the article, "that the fact that this gannet was a genuine variety could have been proved in the usual way; but the policy of the writer, in common with his fellow members of the Zoological Photographic Club, is to depict truthfully wildlife by the aid of the camera and to discourage by every means in their power the slaughter of rare and exceptional birds and beasts, a slaughter apparently condoned and encouraged by many of the self-elected authorities. It would not have been difficult to secure this bird and to have thus satisfied the sceptics, but its life was in our judgement a thing of greater moment than the acceptance or otherwise of a record, and we are content to leave it to the new school of ornithologists to decide whether records can be properly established without a gun and a museum label." The illustrations of a paired Gannet with a dark head and neck and rich patterning on the back sitting next to its pure white mate

are undoubtedly of far greater interest now than the bird's skin would have been in the Royal Scottish Museum.

The earliest Scottish bird photographer who really made good use of his work was Charles Kirk, who ran a taxidermist's business in Sauchiehall Street, Glasgow. He trained at Rowland Ward's in London, and much of his taxidermy was based on photographs taken in the field. Like the Keartons his earliest known photograph is of a Song Thrush's nest; it is dated 1894. It forms the frontispiece of the first of a series of 6d booklets entitled *Wild Birds at Home* (Gowans 1906). Other pictures of nests must be amongst the earliest recorded, a Lapwing's in 1897 and a Mallard's in 1898. A flashlight picture of a Barn Owl, taken before 1906, and flying shots of Gannets, Kittiwakes and terns show how quickly he developed his techniques beyond such static subjects as nests. Ailsa Craig was a favourite haunt and he visited it annually for 17 years. His format ranged from half-plate down to $3\frac{1}{4}$" square, the latter being used for stereoscopic photographs, of which he was particularly fond. His stereoscope and a selection of his prints were presented to the Kelvingrove Museum by the late David Wotherspoon, his chief taxidermist and later his partner. Among Kirk's outstanding work are series on Dippers and Gannets. I am grateful to Charles Palmar both for the details of his work and also for the print from his negative of a Common Gull (pl. 13). This picture, dated 1912, compares favourably with many taken today with all the advantages of modern equipment. There is no doubt about the pictorial effect of such a portrait, where the bird is dominant but the nest-site still a vital part of the picture, with the background subdued by being thrown out of focus.

The rest of our illustrations are by contemporary photographers. Two, Dennis Coutts and W. S. Paton, are professionals running their own photographic businesses. Dennis Coutts started as a press photographer but returned to his native Shetland Isles in 1959, exchanging assignments like the Bulganin and Kruschev visit or trips to Balmoral for the hunt after rare visitors to Shetland such as the recent Snowy Owls or a vagrant Osprey or Woodchat Shrike. His 5" x 4" press camera has given way to a 35mm Pentax with Novoflex lenses of 16" and 25" focal length which with a 2x converter give him magnification factors up to sixteen ("widely used") and even twenty-five. Steadiness means everything with such long lenses and like many others Coutts finds the use of his vehicle as a hide a useful way of achieving this. His photograph of the Storm Petrel (pl. 22) is unique, and was taken in the tunnel of a prehistoric ruin in Shetland where the birds were nesting in something slightly easier to work in than the usual burrow. Even so there was only one

suitable nest and much crawling and squatting was entailed in setting up camera and two flash heads at 5 ft range. This particular nest had more nest material than any other found, and one small chick. After leaving his equipment for an hour Coutts returned to find the adult bird in attendance and he was able to take two exposures before it scuttled into the wall of the tunnel. As with another striking picture of a Peregrine Falcon and chick, Dennis Coutts is prepared to admit that he has had a good deal of beginner's luck with the birds. His photographic expertise is, however, clearly derived from long experience.

William S. Paton has a more conventional approach, seeking the bird portrait rather than the ornithologically interesting picture that has appealed to Coutts. His results are no less striking, and in the last six years he has covered over 50 species of birds in Scotland, mostly at or around the nest. With a choice of six cameras he still does most of his bird work with an old field camera which he bought for 10/- and adapted to take an 8" Ektar lens and a Daz shutter. This is really following in the footsteps of the old masters, and like so many others (including the author) Paton acknowledges his debt to Eric Hosking. He gained his election as an Associate of the Royal Photographic Society from his first full season's work on birds. He has worked mostly in Ayrshire, where he lives, but has a preference for islands, especially Horse Island and Mull. Both the pictures selected (pls. 14, 15) were taken on Mull. The prints are technically flawless and show exceptionally fine feather texture and foliage detail where it is required. In both the bird is in its typical setting in a completely natural posture.

Two of our remaining contributors, David Stephen and Nigel Charles, are full-time naturalists in quite different spheres. David Stephen is well known for his books and writings on Scottish natural history, many of them illustrated with his own photographs. The Hooded Crow (pl. 18) is the sort of bird he knows and writes about superbly well and it is pleasing to find that he can photograph it superbly too. A notoriously difficult species has been caught from a most interesting angle, emphasising the treeptop situation and the massive nest. In contrast, his young Gannet (pl. 21) is an unconventional portrait that breaks many of the rules yet commands attention. David Stephen, who started writing at the age of 19, was twenty years in local government before he retired to devote himself full-time to wildlife.

Nigel Charles is a Senior Scientific Officer with the Nature Conservancy in Edinburgh. For many years he has specialised on grebes, and his aim is to cover every aspect of the lives

of the British breeding species. His studies of Great Crested Grebe displays and of Black-necked Grebes at the nest are unsurpassed and will it is hoped appear in print in their own context before too long. Charles is a perfectionist even when the subject, like the Black-headed Gull (pl. 17), is incidental to his main purpose and was taken from a hide at a grebe's nest. As most of his subjects are long-range, he tends to work in 35mm, using long-focus lenses, up to the 600mm Kilfitt, on an Exacta camera.

John Edelsten breaks our rule in that he is an Englishman. However, as a Customs and Excise surveyor living in Banffshire, and already vice chairman of the Aberdeen branch of the S.O.C. after only three years in Scotland, he would seem to have some claim to be considered in this paper. His aim is the exhibition print, and with little spare time to devote to his hobby he just manages to keep up with the requirements of the Nature Photographers' Society. The superb picture of a characteristic group of Oystercatchers at the water's edge (pl. 20) was accepted for the Royal Photographic Society's exhibition in 1964 and was taken with a ¼-plate reflex camera using a 21" Homocentric lens.

Sidney Clarke, at 22, is the youngest of our contributors; but he made the selection of his charming study of the humble Dunnock (pl. 16) more difficult than most by providing so many other first-rate prints. He started bird photography at the age of 14 on a simple snapshot camera, then acquired his first single-lens reflex miniature at 15, and was doing his own darkroom work at 16, so it is not surprising that his work shows the benefits of long experience. He now favours black-and-white and works with an old Gandolfi 5" x 4" camera using 120 size roll-film. He has achieved the honour of being admitted to the Zoological Photographic Club, an organisation to which many have acknowledged their indebtedness for the stimulus of open competition and the benefits of learning from the work of others. It was as a result of the Z.P.C. Exhibition of nature photography in London in 1912 that *Wild Life,* the first popular magazine incorporating bird photography, was produced. A great many chemicals have flowed through the developing tanks since then and there is no Scottish species left which has not been adequately portrayed by the camera. Yet the fraternity of bird photographers is still limited by the enormous demands of time and effort which the art imposes on its devotees. It is perhaps surprising how few have been Scotsmen, but I would hazard the opinion that the present generation of Scottish bird photographers is producing work that will stand comparison with that from any other country—as will our birds and the landscape in which they are found.

Hill birds of the Cairngorms

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Introduction

This general survey of the Cairngorm hill birds and their habitats starts with the high-arctic ground on the summits and moves down to finish at the upper edge of the forests. The area covered is between Rothiemurchus in the north and Braemar in the south, and between Glen Feshie in the west and Inchrory in the east.

The Cairngorms have two main attractions for a naturalist. One is that they include the biggest area above 3000 ft in Britain, supporting a largely arctic flora and fauna. This is remarkably like much of the country in the high-arctic and cannot be seen elsewhere in temperate Europe; one has to go north to Iceland, Scandinavia or the arctic to find it again. The other attraction is the great variety of habitat in a small area. The valleys round the Cairngorms have farms and villages up to 1200 ft. Nearby there are forests of pine and birch with juniper scrub, including some of the finest old pines in Britain, yet the tree line is very low at about 2000 ft or less. Beyond there are heather moors and bogs on hill slopes and open glens, stretching up to the dwarf arctic-alpine vegetation at 2500 ft. There is even more variety higher up, with cliffs, corries, lakes and plateaux, and finally the highest summits at 4200-4300 ft where the ground is almost devoid of plants and snow fields lie all the year round. In some places one can go from one extreme to the other in a walk of only six miles.

The reasons for these rapid changes of habitat are the big temperature drop of 4°F per 1000 ft of altitude, the frequency and severity of gales on these hills, and the low summer temperatures. July temperatures even in the valleys are below those north of the Arctic Circle in Lapland, and at 4200 ft on Ben MacDhui are like those in high-arctic Canada (Baird 1957). Being in the centre of Scotland the Cairngorms get colder and snowier winters and drier sunnier weather than the mild, maritime and rain-drenched hills that make up most of the Highlands. This is why they provide the best skiing grounds and the biggest variety of snow and ice climbs in Britain, but thaws may occur in any winter month with winds from the Atlantic. The maximum snow depth is usually in February-March at 2000 ft, and above 3500 ft

usually in April but sometimes May. Snow may fall in any summer month on the higher ground, but in the uncommon periods of fine calm weather the summits may be warmer than the valleys.

Most of the Cairngorms belong to several private landowners who use their hill land for hunting red deer. Apart from some heather burning on the lower slopes and grazing by a few stray sheep, the high ground of the Cairngorms has remained a natural habitat. Many sheep have been grazed in summer in the last two years but mainly on the lower hills and moors. Most of the area is in a National Nature Reserve, which gives the Nature Conservancy control of development and opportunities for research.

The arctic-alpine zone

A walker going up the hills can easily know when he reaches this zone by its dwarf plants, many of them arctic species, and also by seeing the fairly uniform heather moor change to a diverse mixture of grasses, lichens and heaths. This zone usually starts at about 2500 ft but this varies from 2000 ft to 3000 ft according to shelter and aspect. The vegetation is mainly heathy, but is grassy where the snow lies long. There are many boulders and frost-heaved gravel beds, and vegetation decreases rapidly with height till at 4200 ft the summits are barren wastes of stone and sand, with few plants other than some lichens and mosses.

Ptarmigan. Ptarmigan are the commonest birds in the arctic-alpine zone. Except possibly for voles, which are sometimes abundant on grassy places up to 3250 ft but scarce higher up, Ptarmigan are the commonest resident vertebrates. Red deer do not graze in this zone in winter, and although many may be seen there in summer most grazing is done in the glens below.

Ptarmigan food in the Cairngorms consists mainly of crowberry leaves, blaeberry stems and leaves, heather tips and some dwarf willow (Watson 1965a). They live wherever crowberry or blaeberry are abundant, especially where boulders give good shelter or cover. The highest breeding Ptarmigan live at 4100-4150 ft on Ben MacDhui, on patches of dwarf willow among boulders, and the lowest at 2000 ft on exposed ridges. They are not on the summits at 4200-4300 ft, nor on completely barren stone fields. They do not live on continuous grassland except where there are occasional islands of screes or stony moraines with some heathy vegetation. Cliffs are occupied as well as vegetated hill slopes, screes and flat ground. No Ptarmigan stay above 3500 ft in heavy winter snow, and in severe winters they may all be below 3000 ft for weeks on end, feeding largely on heather.

But they do not desert even their local hill in snowy periods, far less the whole Cairngorms.

The cocks defend their territories and pair with the hens in the early morning in autumn and winter, but all day long after February or March. In autumn and winter they do this only on fine mornings when the ground is largely snow-free, and on most winter days the weather is so bad that they are in flocks. On calm mornings in February or March the air is filled with the continuous croaking of the cocks, and in every direction there are Ptarmigan chasing each other or fluttering up and down in song flights. Summer on these hills is largely silent and lacks this vigorous outburst of life, although the cocks still challenge each other in the early hours after dawn. The cocks have favourite lookouts on prominent mounds, boulders or cliff turrets where many droppings collect in spring and where the vegetation is often different from the poorer soil nearby.

In snowy weather the Ptarmigan feed in flocks wherever the continual winds have drifted the snow off the vegetation, sometimes scratching the snow with their feet to expose the plants. They roost in snow hollows or holes, but there is no danger of them being buried because they choose exposed places where falling snow quickly drifts away. However, they do not sit right out in the open, and nearly always use some small local shelter, such as behind a stone. Many climbers, fighting their way apprehensively in gathering darkness in a blizzard, have envied the Ptarmigan preparing to spend a comfortable night on the exposed summits.

A population study in the Cairngorms showed that breeding stocks rose to a peak in the early 1950s and 1960s, and decreased in the mid 1950s after summers of poor breeding (Watson 1965b). They did not breed any worse in summers after the winter and spring food supply had been greatly reduced by deep snow. However, breeding was late and poor after springs when the new growth of the vegetation was late, as Siivonen (1957) also found in Finland with other game birds. Breeding success was not related to the rainfall and temperature in summer. Summer snowstorms lasting a day or two and with less than six inches of snow had no effect even if they occurred repeatedly every few weeks throughout the summer as in 1965. However the great snowstorm of June 1953 was of winter severity, and lasted three days. Many Ptarmigan and Dotterel deserted their eggs, which were found cold after the snow melted, and most Ptarmigan and Dotterel were in flocks for the rest of the summer. Such severe summer snowstorms have occurred only twice (in 1942 and 1953) in the last 20 years (Nethersole-Thompson 1966). In any case breeding might have been as bad without

the snowstorms, as it was in many other years without snow. Similar catastrophic breeding occurred in 1955 with fine sunny weather; and conversely the birds bred well in 1948 in spite of several snowstorms, heavy rain and low temperatures.

How do Ptarmigan and Dotterel chicks survive in some bad summers with occasional or even frequent snowstorms? I have sometimes ween amazed to see Dotterel and Ptarmigan chicks at the critical age of 2-5 days running about vigorously the day after a 12-inch snowfall. However, these snowfalls are usually accompanied by drifting, and unless they are of winter severity, which is exceptional, they do not cover the boulders. The large spaces under and among the boulders are usually completely free of snow, and the soil there is not frozen. Many insects are active there, even during the winter on mild days, and midges and other Diptera crowd into these places after summer snowstorms. Since Ptarmigan and Dotterel broods are very often found on ground with boulders, and Snow Buntings regularly hunt these places, food shortage is probably seldom serious after most summer snowstorms.

Ptarmigan breed over most of the mainland Highlands above 2000-2500 ft, and on some of the islands. In parts of the northwest Highlands they breed down to 1000 ft, and even to 600 ft on one coastal hill near Cape Wrath, where the winter temperatures are like southern England but where the arctic-alpine vegetation grows at very low altitudes because of severe winds. However, they are generally scarcer in the west, where the peaks are sharp with little high ground and the vegetation is largely mossy and grassy due to high rainfall. The Cairngorms and neighbouring Lochnagar and other hills near Braemar are their stronghold. Here there are vast areas of continuous high ground and a heathy vegetation supplying abundant food. The breeding population of the Cairngorms has been roughly estimated at 1300 in a low year and 5000 in a high year, with up to 13,000 in a peak autumn (Watson 1965a). One of the surprising things about Ptarmigan is that they reach much higher densities in the Cairngorms-Braemar area than have been recorded in the arctic.

Snow Bunting. Apart from Ptarmigan, Peregrine and Dunlin, Snow Buntings are the only circumpolar high-arctic birds breeding in the Cairngorms. However, they are very much scarcer than Ptarmigan and do not breed on most hills. Many thousands move into Scotland from Scandinavia and southeast Greenland every October and stay till March. Flocks of scores may be seen on any winter day in the hills or glens, feeding on seeds of rush, sedge or grass, and some-

times they concentrate in hundreds. Most of them have departed by late March. A few small flocks are occasionally seen in April in some years but have nearly all moved north by the third week, leaving only a very few individuals to breed.

In May and June in the Cairngorms the cocks sing loudly from large boulders or crags where many droppings accumulate, and they often launch off from these places in far-ranging song flights. The song is sweet, unlike the jangling songs of other buntings, and has a far-carrying and ventriloquial quality. Desmond Nethersole-Thompson, who has lived in the pine forest of Rothiemurchus below the Cairngorms for thirty years, has a monograph on the Snow Bunting in press. The Cairngorms are the Scottish stronghold of the Snow Bunting. They bred on several hills in Sutherland, Ross and elsewhere at the end of last century, but a brood on Ben Nevis is the only record in the last thirty years apart from the Cairngorms. In the best years such as 1947 the Cairngorms have had three pairs and seven or eight unmated cocks (Nethersole-Thompson 1966), and four pairs in one corrie in 1909 (Gordon 1915), but in other years only an odd pair or even just unmated cocks. There are only two fairly regular breeding areas, both in boulder-strewn ground above 3500 ft near large summer snowfields, but unmated cocks or breeding pairs occasionally live on other hills. The snowfields may be important, because they are often littered with dead or comatose insects that get stranded there and provide a ready and easily picked-up source of food. These are most abundant on warm days. Many are arctic species such as arctic weevils and beetles, but others are lowland ones such as pine weevils, flying wood ants and other species which presumably get carried from the pine forests far below by currents of warm air. Meadow Pipits, Snow Buntings and Wheatears feed there frequently and take these insects to their young. A major insect food of the Snow Bunting is the cranefly *Tipula* sp., which is found mainly off the snow and is sometimes very common.

Snow Buntings often rear two broods in Scotland, but only one in the high-arctic. Nethersole-Thompson has done a detailed study of the behaviour and breeding of his few birds, which often had distinctive plumage and which he came to know very well as individuals. He has also tried to find if the Scottish birds are a distinct Scottish stock hanging on as a relic of glacial times, like the Ptarmigan, or simply occasional arctic birds that stay to breed. The second explanation is the more likely. Iceland cocks have dark rumps and Norwegian and Greenland cocks white rumps. Both kinds occur in the Scottish breeding stock, and the proportion of dark-rump-

ed to white-rumped changes from year to year. This suggests that the proportion staying behind in Scotland from the Iceland or Scandinavian stocks varies. The other possibility is that there is a distinct Scottish stock which is very variable because it is so small. This is unlikely, because no breeding hens have been recorded in some years, and in other years not even unmated cocks.

Snowy Owl. This is the third high-arctic bird of the Cairngorms but has not yet been recorded breeding. The first record in the Cairngorm hills was an adult male on the Ben MacDhui plateau in summer 1952 (Van den Bos, Watson & Watson 1952). It ranged all over the plateau as far as Cairngorm but its favourite haunts were in the fine piece of high-arctic country northeast of Ben MacDhui. What was perhaps the same bird spent the following summer there also and was seen in one of these years on a cliff turret of Sgoran Dubh (Nethersole-Thompson *in litt.*). It was using certain prominent boulders as perching places where it sat motionless for hours on end, and remains of prey found there showed that it had fed on a mountain hare and on several grouse-like birds, probably Ptarmigan (Tewnion 1954). The Snowy Owl's food in the arctic is mainly small mammals, especially lemmings, but voles and other small rodents are scarce on the grasslands of the MacDhui plateau.

An adult male again frequented this area in summer 1963 (Gribble 1964) and in summer 1965. There is no doubt that breeding has not occurred. Breeding males in the arctic give themselves away by calling loudly, following the observer and often attacking him. This behaviour starts as soon as the observer enters the bird's large territory, and intensifies the nearer he gets to the nest. By contrast the adult cocks in Scotland have been silent, although the 1965 bird angrily scolded Brock Nethersole-Thompson at one place. However, a few Snowy Owls breed in the central highlands of Iceland, living mainly on Ptarmigan in this rodent-free area, so it is not completely without reason to expect that a pair may nest on Ben MacDhui in some year of high Ptarmigan numbers. Incidentally, the years when a Snowy Owl was seen were all years of Ptarmigan abundance, and none was seen in the low Ptarmigan years 1956-58.

Dotterel. The Dotterel is an arctic-alpine bird which has not colonised most of the New World, Greenland, Icelaned, and Spitsbergen. Its main breeding distribution is on tundra near or at sea level in the far north of Scandinavia, Russia and Siberia north to Novaya Zemlya and east to Mongolia and Alaska. However there are many isolated outposts on mountains in Lapland, south Scandinavia, U.S.S.R., Austria, Poland, Czechoslovakia, the Appenines, Rumania, Scotland,

occasionally north England, and now the Dutch polders. It is not certain if the Dotterel is by origin a mountain bird, and only a recent colonist in the arctic, or vice versa (Voous 1960). Dotterel are summer birds in the Cairngorms, leaving the hills in August to migrate to North Africa and the Middle East, and returning again in early or mid May when the Cairngorm winter is past. They are much commoner than Snow Buntings but much scarcer than Ptarmigan, reaching densities of a pair per 200-400 acres on suitable habitat (Nethersole-Thompson 1951). They breed regularly on a few hills in Ross-shire, west Inverness-shire, Perthshire, and on the Monadh Liath hills west of the Spey valley; on some of the Grampian hills west and south of the Cairngorms they are locally quite common. They breed on most hills in the Cairngorms, with up to 5 or 6 pairs on some hills and more in occasional peak years. They arrive in flocks and up to 40 have been seen together in May about the time when they come back (Watson 1955). They again form mixed flocks of old and young in August just before leaving. Occasional birds, especially cocks, sometimes live for several weeks on areas where no breeding has been recorded, and sometimes visit such places briefly on migration.

Dotterel occupy mossy or grassy ground on rounded summits, plateaux, gentle slopes and ridges. A few nest on fairly barren stony ground with patches of moss, lichens and grass, but none occupies the very barren screes of the Snow Bunting or the boulder-strewn heaths of the Ptarmigan. They breed from 3200 ft to 4000 ft, but on nearby hills in the Grampians many nests are found between 2700 ft and 3000 ft, with extremes of 2500 ft and 3700 ft. In the Grampians some of the Dotterel are also on mossy-grassy ground with peat hags. Their food is mostly insects and spiders.

Dotterel are unusual in that the hen is bigger and more brightly coloured, does much of the courting, and leaves the cock to do nearly all the incubation and rearing of the chicks. Nethersole-Thompson has made a detailed study of the Dotterel, which we hope to see published in the next few years. He concentrated on studying the behaviour of well known individuals. Dotterel can easily be approached within 30 yards even when they are not nesting. Their Gaelic name is *An t-amadan mointeach*, or fool of the moss; and the 'daft dotterel' is an expression from lowland Scotland. Some of Nethersole-Thompson's earlier observations can be read in Witherby *et al.* (1938-41) and in Bannerman (1961). Unmated hens chase the cocks in the flocks and make advertisement flights with a special call. Later the cock may chase the hen and court it, and both take part in symbolic nest scraping.

The cock does all or nearly all the incubation of eggs and

also shuffles away from a dog or man with injury flight and other distraction displays. When the cocks are brooding, the hens live in small groups and sometimes spar and display on communal display grounds. A hen Dotterel sometimes mates with two cocks in succession, leaving each with a clutch, but some hens do brood. Hens also sometimes rejoin cocks and chicks towards the end of the fledging period, whereupon the cock may try to drive the hen away.

Dotterel usually lay in late May or early June and hatch the chicks in late June. The time of breeding varies with the snow cover. After the very snowy winter of 1951 the Ben MacDhui plateau was still under deep firm snow in the last week of June. There was a pair of Dotterel on every large snow-free area, frequently taking off in display flights over the snow. They were fully a month late in breeding. Nethersole-Thompson in his Snow Bunting book shows the dates when he found first eggs of Dotterel, Snow Bunting and Ptarmigan. The Dotterel and Ptarmigan varied more from year to year than the Snow Bunting, possibly because they nest on open ground and not in sheltered holes under boulders like the Snow Bunting.

Dotterel usually lay three eggs, like Oystercatchers and unlike most other waders, which lay four. As they rear only one brood, a 50 : 50 ratio of young and old in August means very good breeding. In occasional years of severe summer snowstorms, such as 1953, the Dotterel desert their nests or lose all their young, and then go into flocks for the rest of the summer, but most summer snowstorms do not affect them. The fully grown young are remarkably unlike the adults in plumage, having a generally creamy ground colour with heavy blackish marks on the wings and back. The eye stripe and crescent on the breast, so prominent in the adult hen, are paler in the adult cock and indistinct in the full grown young.

Other birds in the arctic-alpine zone. The other species breeding on the high ground are mostly arctic in distribution, but do breed down to sea level in Britain and other parts of their range in the temperate zone. Those of mainly arctic distribution are the Golden Plover, Dunlin, Wheatear and Meadow Pipit. The only other regular breeder in the arctic-alpine zone is the Ring Ouzel, which has a northern European distribution. The abundance of these birds varies on different hills. The differences are due to the habitat selection of the birds, with more Golden Plovers and Meadow Pipits on grassy hills and more Wheatears, Ring Ouzels and Ptarmigan on stony hills. One of the surprising things about the Scottish hills is the absence of breeding Ringed Plovers, although they breed at low densities over vast areas of

similar terrain in Iceland, northern Scandinavia and arctic Canada.

Golden Plover. Golden Plovers breed on stretches of continuous mossy grassland, with peat bogs or peat hags, sometimes in the same area as Dotterel; but Dotterel do not breed below 3200 ft in the Cairngorms, whereas Golden Plovers breed on moors near sea level. Unlike Dotterel, Golden Plovers rarely occur on fairly barren stony areas with occasional patches of grass and moss, and seldom breed on continuous grassland without peat. They commonly nest up to 3500 ft on suitable areas, and occasionally up to 3700 ft on Beinn a' Bhuird and Ben A'an, whereas many Dotterel in the Cairngorms are above 3500 ft. The highest grasslands at 3800-4000 ft are occupied by Dotterel, and Golden Plovers have not been found breeding there, although pairs have been seen occasionally. The most extensive areas for plovers are on the fairly grassy and peaty western hills of Carn Ban-Moine Mhor and the similar eastern hills between Yellow Moss and Ben A'an, but higher populations occur on the continuous peaty grasslands of the Grampians further south. Below 3000 ft the Golden Plover breeds not only on grasslands, which are now much more peaty and comprise a different plant community from the higher grasslands, but also extensively on heathery ground, even where it is open as a result of burning. The even slopes of heather on the hillsides are largely unvisited by Golden Plovers, but they occur on flat or gently sloping areas, especially among peat hags or bogs but sometimes on largely dry flat moorland. Hence there is often a gap on well drained slopes from 2000-2500 ft where few or no plovers occur (Nethersole-Thompson 1957a), but they occur at these altitudes wherever there are peat bogs.

Golden Plovers are away from the hills in winter, but are early back in spring. On the first day of thaw in early March, after weeks of heavy snow, it is common to see a single plover paying a fleeting visit to snowy wastes at 2000-3000 ft, and this may be seen even in January or February on the moors at 2000 ft. The entire population returns in March or April as soon as there are scattered patches of completely snow-free thawed-out grass, even if 98% of the ground is buried in deep snow. Sometimes they start song flights with slow-beating wings on the day they return, with a greater intensity than at any time later. The song is a series of quick, mournful, piping calls going down, up and then down again in pitch. A single mournful piping note is given on the ground; this and the song carry fully half a mile on a quiet day. This single call, the croaking ground call of cock Ptarmigan, and the song of the Meadow Pipit are the commonest sounds heard by the ornithologist camping on the Cairngorms in summer. Nethersole-Thompson has done a de-

tailed study of the Golden Plover's spectacular courtship and aggressive behaviour (summarised in Witherby *et al.* 1938-41, and in Bannerman 1961). Although they are usually in pairs, communal displays are also frequent.

The Cairngorm Golden Plovers do not lay till early May, and after severe winters not till after mid May. Some of them appear to be non-breeders, staying in small groups and not pairing up; these have little or no black on the face, throat or belly. Most young are fully grown in mid July, and young and old then gather into flocks or 20 or more, reaching 50 or even 100 on hills with large areas of suitable habitat. Some of the birds move upwards on to the highest grasslands, which become deserted by Dotterel in August, and may be seen in flocks even at 3800-4100 ft where none has yet been found breeding. The arctic-alpine Golden Plovers remain in flocks on high grasslands at over 2500 ft into October and even into November if the weather is mild, and they are occasionally seen on the most barren ground; I once saw four near the cairn on Ben MacDhui on 15th October, although there was some fresh snow on the ground. Yet breeding places on the lower moors and valley are deserted in August, coinciding with the appearance of flocks on lowland farms and estuaries.

Some of the high-altitude birds are strongly marked with black and white on the head and neck like typical 'northern' birds *Charadrius apricarius altifrons;* many are intermediate and very few males look like the illustrations of 'southern' birds *Charadrius a. apricarius* in Witherby *et al.* (1938-41). These 'northern' birds and intermediates often occur on lower moors, but may be more frequent at high altitudes (Wynne-Edwards 1957, Gordon 1957, Nethersole-Thompson 1957b, Hewson 1957, Tewnion 1957, Watson 1957a).

Dunlin. Dunlin are much scarcer than Golden Plovers or Dotterel, except on a few areas in the west Cairngorms, but on the few areas where they occur they are commoner than Dotterel. Small groups of pairs are concentrated on grassy areas with peat hags and boggy ground in the west and southwest Cairngorms, and on the Yellow Moss of Derry. Isolated pairs also nest on some of the slopes and ridges of the higher hills on the west Cairngorms up to over 3500 ft, and in 1962 and 1963 a pair nested on a ridge at 3600 ft on the Ben MacDhui plateau (Nethersole-Thompson *in litt.*).

In the west Cairngorms Nethersole-Thompson occasionally found a Dunlin nesting on the same slope as a Dotterel, and once within five yards of each other. The distribution of Dunlin in Scotland is very unusual. Many nest locally on bogs at sea level and on mountain bogs, but there are very few in between. On Speyside, Nethersole-Thompson found

that an odd pair or two occasionally nest at two lochs in the valley floor and on a few boggy foothills near the edge of Abernethy Forest. No other nesting places were found in this large area, although there are quite large nesting groups not far away in the Cairngorms and high Grampians. Similarly on Deeside there are several bogs in the valleys around 1500 ft with a pair of breeding Dunlin, and no others till one reaches the peaty bogs of the arctic-alpine zone. Outside the Cairngorms proper many pairs also breed on the grassy peat mosses on the Glen Clunie-Glen Ey hills south and southwest of Braemar.

The best time to look for Dunlin is soon after they return in May, when they are usually heard long before they are seen. The song is a long trill, at a distance sounding like a whistle with a rattle in it, and it can be heard easily half a mile away. Nethersole-Thompson has twice watched Dunlin with greyish-white napes, large black patches on the belly, and other features resembling the northern race, which breeds in Scandinavia. One of these was a very tame bird near the Wells of Dee on Braeriach in June 1941.

Passerines. Wheatears are common on dry stony ground and along dry cliffs; and Meadow Pipits are common on both heath and grassland, especially where the vegetation is fairly continuous and not broken up by many screes. Both breed up to 4000 ft and occasionally 4100 ft (I have seen newly fledged Meadow Pipits still with a lot of down being fed at 4200 ft on Braeriach) but they are commoner below 3500 ft. Meadow Pipits reach highest densities below 2500 ft on the well vegetated heathy lower slopes, whereas Wheatears are scarcer there than higher up, except where there are patches with many boulders. Both species return between early April and early May, according to the weather and snow cover, but in the arctic-alpine zone the bulk of the population does not usually return till late April and early May. In most years they are back at 2500 ft 10-14 days before they come at 3500 ft, but in years when a rapid thaw and summer temperatures reach all altitudes they may colonise all the ground simultaneously. By contrast, in the very snowy year 1951 they did not return at 3500 ft till late May. They show an intense burst of territorial behaviour and singing in the first few days.

Both lay in late May like most other Cairngorm birds, and most young fledge in late June. The birds then flock together, and in July-August often move up to higher, more barren ground, especially in fine warm periods, when hundreds of Meadow Pipits and scores of Wheatears may be seen around the highest summits at 4200-4300 ft hawking for insects, in places where few or none bred earlier on. They

often concentrate on the remaining snow patches. On one day in mid August I saw over 150 Meadow Pipits and 20 Wheatears picking up stranded insects just northeast of the Ben MacDhui summit on a snow patch barely 100 yards long and 30 yards wide. Most Wheatears move away before late August and only an occasional bird is seen in September, but most pipits do not leave till mid September and some not till October if there is no snow. Many pipits also move down into the pine forests in August, so that nearly all are either above 3000 ft (sometimes all above 4000 ft) or in the forests.

Apart from Snow Buntings, Ring Ouzels are the scarcest passerine in the arctic-alpine zone. They occur only on or near cliffs or among very large boulders on steep slopes, and are usually absent from the highest cliffs above 3500 ft, although Perry (1948) saw one cock singing at 4000 ft at the Wells of Dee, and I have seen a newly fledged brood at 4000 ft on Cairn Toul. Below 2500 ft it is much commoner, nesting on cliffs, steep screes, rocky gorges and among juniper scrub. Its piping song is sometimes mistaken for a Snow Bunting's but is much more monotonous; one corrie has both species close together. Ring Ouzels, Meadow Pipits and Wheatears nesting below 2000 ft have young by the end of May in a mild spring, and the earliest nesting pipits may have fledged young by then, but in the arctic-alpine zone it is usually mid June before all three hatch their young. At 3800-4100 ft the young do not fledge till early July. After the breeding season Ring Ouzels gather into flocks and may move away from the stones, especially to places with many berries. They leave the arctic-alpine zone in late September and return in late April and early May, but the first ones are back in the glens below in mid April.

Heather moors

Red Grouse. The ground below the arctic-alpine zone is mostly well drained moor covered mainly by heather. On flat ground there are peat bogs with some cotton grass, and there are extensive grasslands on well drained valley floors and occasionally on patches of good soil on the slopes.

Apart from Meadow Pipits, Red Grouse are the commonest breeding birds below the arctic-alpine zone, and on many hills near Braemar are commoner than pipits. Grouse are certainly the commonest bird of the Cairngorm heather moors in terms of numbers plus weight, just as Ptarmigan are in the arctic-alpine zone. The edge of the arctic-alpine zone is where Red Grouse and Ptarmigan are separated. On some hills this is a sharp contour line along the hillside and the territories of the two species are entirely separate. On most hills, however, patches of long heather occur up to 3000 ft in sheltered places, and patches of arctic-alpine vegetation

down to 2000 ft in exposed places or on screes. Thus although the two species overlap in altitude they do not overlap in habitat. In July and August, when there is hardly any territorial behaviour by grouse or Ptarmigan, grouse families often move up to the lower part of the arctic-alpine zone and in August-September flocks sometimes go as high as 3300 ft. In winter hardly any grouse are in the arctic-alpine zone, and in heavy snow the birds on the heather moors just below this zone move down several hundred feet. However, in the worst winters such as 1951 they completely deserted the upper valleys and moved several miles to the lower valleys and near the pine woods, whereas Ptarmigan held on in the 2000-2500 ft zone.

Counts of Red Grouse in the Cairngorms show breeding stocks varying from one to five pairs per 100 acres in different years. This density is the same as that of Ptarmigan higher up (Watson 1965b) if the total acreage of ground is included, but in fact large grassy areas on the high plateaux are unoccupied by Ptarmigan, whereas nearly all ground below 2500 ft is suitable habitat for grouse, since arctic-alpine vegetation comes below this level only on very exposed ridges or screes. Hence Ptarmigan densities on the best habitat in the Cairgorms are much higher than the highest grouse densities lower down. It should be said that these grouse stocks are very low by grouse-moor standards. Although most of the ground below 2500 ft is heathery and thus supplies plenty of food, cover is poor because of large fires burned there in spring. These commonly cover 50-100 acres, whereas high grouse stocks are usually on moors with fires of 10 acres or less. Ptarmigan and grouse both reach similar densities at Cairnwell, Carn an Tuirc and Lochnagar near Braemar, and both are much commoner there than in the Cairngorms; they may reach an average density of a pair per 4-5 acres, which is very high by grouse-moor standards, although these places are run primarily as deer forests.

The reason why population densities of grouse vary so much on different moors is a major problem facing the Unit of Grouse and Moorland Ecology. Stocks tend to be higher where there is more heather (Jenkins, Watson & Miller 1964). However one moor east of the Cairngorms has had much higher stocks on average over a period of years than a nearby moor below Lochnagar where the amount of heather has been similar. In this case the low stocks occur on a moor over granite, and the high stocks over the mineral-rich diorite. Heather on the diorite is richer in phosphorus and nitrogen, so the higher grouse stocks may be due to food of better quality.

Therre are also examples of this in the Cairngorms. Most hills are granite and rarely support as much as a pair of grouse per 20 acres, and often only a pair per 50-100 acres. However some hills on the richer schists, for instance on the Yellow Moss, Meall an Lundain, Feith na Sgor and Glen Geldie, support higher densities of up to a pair per 10 acres in some years. The keepers have tried grouse shooting on all the hills but it is only on some of the schist hills that it is worthwhile and still done annually. Yet the schist hills are no more heathery than the granite hills, and in some cases, such as Yellow Moss, are less heathery.

Predators. Golden Eagles are the commonest bird predators in the arctic-alpine zone, but do most of their hunting on the heather moors. A few eyries are at 3000 ft but nearly all are below 2500 ft. Most are below 2000 ft, including many in pine trees at 1500-2000 ft. About one fourth of the hunting ground of eagles in this region is in the arctic-alpine zone (Brown & Watson 1964), and out of 17 pairs in the Cairngorms-Braemar area only one does not have arctic-alpine ground in its hunting range. Ptarmigan are an important food for some pairs, and eagles hunt all over the Cairngorms and regularly fly over the highest summits, even in the dead of winter when Ptarmigan and hares have entirely deserted these places. There are also favourite eagle perching places at high altitudes, including one on a summit rock at 3700 ft with a marvellous view over most of Scotland.

The food of the Cairngorm eagles is mainly live Red Grouse, Ptarmigan, mountain hares and rabbits, and red deer carrion. They take a great variety of other prey, from moles and water voles to fox cubs and deer calves, but these extras make up a small part of the total diet. In autumn Nethersole-Thompson has seen eagles chasing geese on passage, and in the goose season as many as five eagles sometimes hunt the ground above Loch Einch, which is one of the main routes followed by geese over the hills.

The number of adult pairs on the Dee side of the Cairngorms has been very steady since 1944, with about one pair per 16 sq. miles (Watson 1957b); there was one extra pair around 1950 and another pair vanished in the late 1950s. Breeding success has also been very steady, with about 0.8 young reared per pair per year. This steady breeding was surprising in view of the big fluctuations in their food supply from year to year, with fluctuations in the numbers of grouse and Ptarmigan, myxomatosis in rabbits, and some years with many hundreds of dead deer and others with only a few scores. The eagles evidently had so much ground that these changes in food had no effect (Brown & Watson 1964).

These high eagle densities are typical of a large area of

deer-forest country in upper Deeside to the east and in north-west Angus and north Perthshire to the south and southwest. Deer stalkers in this area have left the eagles alone during this period although the birds were often persecuted in earlier decades, as in most of the Highlands. Unfortunately the eagles on the Spey side of the Cairngorms have had a sorrier story of persecution lasting into the post-war years, with frequent changes of mate in different years, often known to be due to shooting, and territories often lacking one or both birds in summer. From 1932 to 1946 Nethersole-Thompson (*in litt.*) found that only 0.5 young were reared per pair per year. This is similar to what Sandeman (1957) found in 1950-56 in Perthshire, where eagles were also frequently shot, trapped or poisoned. Eagles are still generally shot and trapped on grouse moors on every side of the Cairngorms. Most of the Cairngorm eaglets disappear in September-October, and this coincides with the appearance of many young eagles on the grouse moors, where few or no eagles breed successfully. Hence there seems to be a big export of young from the Cairngorms every year.

Peregrines, Kestrels and Merlins all breed below 2500 ft and occasionally hunt in the arctic-alpine zone, but are seen there much less frequently than eagles. The Peregrine is the most frequently seen of the three on the highest ground above 3500 ft. Kestrels hunt regularly up to 3200 ft and occasionally higher, especially in years and places in which voles are locally abundant. Their pellets show that small rodents and beetles are the main prey. The Cairngorm Peregrines live mainly on grouse, plovers, and sometimes Ptarmigan, and the Merlin hunts for pipits and Wheatears. However all three falcons hunt mainly on the moors below the arctic-alpine zone, and also breed there. Four pairs of Peregrines breed among the lower Cairngorm foothills at the edge of the forests in the Spey and Dee valleys, but only one pair breeds in the high massif itself. At least five or six pairs of Merlins are known on the Dee side of the Cairngorms, all in glens or on low hills below 2000 ft. Kestrels are commoner still but the exact number is not known.

Ravens may also be seen flying over the highest ground in winter, though living mostly on the lower hills. None breeds in the Cairngorms although a few pairs do so nearby in the side glens of the Dee and Spey valleys. This absence is remarkable, considering the widespread distribution of Ravens in most mountain areas in Britain. It might be due to competition from eagles but might also be due to lack of abundant food in summer on the higher hills. Deer carrion in this area occurs mostly in winter and spring, with hardly any in summer; moreover the amount of sheep carrion is

negligible because most of the Cairngorms are not used for sheep grazing. Ravens breed commonly on most hill-sheep areas in western Britain, but there ample carrion is available, even in summer, because of the heavy mortality of sheep and lambs (Brown & Watson 1964). However, some Ravens appear every year in the Cairngorms in September and stay till January-February feeding largely on the intestines and other remains of shot red deer and on deer that have died naturally. During the stalking season Ravens sometimes appear within 10 minutes of shots being fired, and may come down to feed on the discarded gralloch within 20 minutes of the stalkers leaving.

I know of no record of a Short-eared Owl breeding in the Cairngorms, but in May 1960 Nethersole-Thompson watched a male displaying above the forest southeast of Loch Morlich. A few breed nearby on the hills east of Invercauld and on the Glen Ey-Glen Clunie hills up to 1800 ft where voles are more common than in the Cairngorms, and occasionally hunt there in summer up to 3000 ft. An occasional bird is seen on the Cairngorms in autumn in Glen Einich, Glen Dee or Glen Derry. Similarly, no Hen Harrier has been found breeding in the Cairngorms, although a pair nested in 1936 on one of the foothills of Abernethy and a pair occasionally nests in Rothiemurchus and lower Glen Feshie. In autumn occasional birds on the move hunt the lower slopes of the Lairig Ghru and Glen Einich and one was seen in September on the Yellow Moss at 2800 ft. By contrast the grouse moors not far away to the east of Braemar and north of the Cairngorms are visited every autumn by many juvenile and sometimes adult harriers, which stay there till March if not shot or trapped, living mainly on grouse and small rodents. The general absence of breeding harriers from the Cairngorms, and the complete absence of a breeding record from the Mar side of the hills, cannot be due to persecution by keepers. On the Mar side, birds of prey have been left alone since at least 1945, yet the harriers continually try to colonise grouse moors not far to the east where they are persecuted worse than eagles or Peregrines. Their absence from the Cairngorms must be due to something else, possibly a deficient food supply or inhospitable climate.

No Buzzards were known in the Cairngorms before 1940, except a pair that nested in Inschriach forest in the 1920s (Nethersole-Thompson *in litt.*) but two pairs now breed in the main Dee valley near Braemar and occasionally hunt the lower hills up to 2500 ft. On Speyside Buzzards now nest also in Rothiemurchus Forest and at Pityoulish and occasionally soar above the high ground at over 3000 ft on either side of the Lairig Ghru (Nethersole-Thompson *in litt.*). Gor-

don (1912) noticed that no Buzzards or Ravens nested in the Cairngorms area and wondered if this was because eagles do not allow the species to nest near them. Ratcliffe (1962) gave some evidence of antagonism between eagles and Peregrines or Ravens, and Brock Nethersole-Thompson once watched a mid-air fight between an eagle and a Peregrine in May 1961 near a Peregrine nesting place. There are still no Buzzards in the central high mass of the Cairngorms, but this could also be due to lack of rabbits there.

Other species breeding on heather moors. Cuckoos are common in valleys and on lower slopes up to 2000 ft, arriving at the beginning of May. Most are in open parts of the pine forest but many live up to a mile from the nearest trees on open moors. Nearly all Cuckoos on the moors are reared by Meadow Pipits. Many Skylarks breed on the grassy valley bottoms up to 1500 ft and some up to 2200 ft, but some have been recorded singing higher up in summer, for instance at 2800 ft on Yellow Moss, at 3000 ft on the Moine Mhor, and even at 3500 ft on Glas Maol south of Braemar. Occasional pairs of Whinchats and Twites nest in the open treeless glens up to 1500 ft, but both are uncommon. Twites are occasionally seen higher, including one at 2700 ft in Glen Geusachan in March and one with a flock of Snow Buntings in Glen Dee in January. Occasional pairs of Pied Wagtails breed at bothies, ruined houses or inhabited cottages up to 1600 ft, and a pair breeds at the Cairnwell skilift station at 2100 ft.

Curlews and Greenshanks live mainly on the moors and valleys below the tree line at 2000 ft. Most glens have one or two pairs of each. Nethersole-Thompson (1951) gave a full description of the Greenshank's behaviour, breeding and habitat from a detailed study in the Spey valley. In recent years he has noticed fewer Greenshanks in central Strathspey and there are fewer on the Dee side of the hills than in the late 1940s. Snipe are common in boggy gaps in the pine forest and on boggy valleys and hillsides but do not breed above 2000 ft. In spring they return one to two weeks later than Golden Plovers, but an occasional bird stays in winter, frequenting boggy flushes in the forest till frost and snow cover all these places. Lapwings have bred up to 2700 ft on the isolated hill of Morven east of the Cairngorms for many years and a pair sometimes breeds up to 2800 ft on the Yellow Moss east of Glen Derry and on Carn Ban Mor in the west Cairngorms. A few also breed on valleys on boggy ground at and below 2000 ft. The highest Oystercatchers breed on treeless valley bottoms at 1500-1600 ft.

Occasional visitors. In July and up to mid August, many flocks of Rooks and some of Starlings appear on the valley floors and moors up to 2000 ft, sometimes almost reaching

the edge of the arctic-alpine zone at 2400 ft. Hundreds of Rooks are sometimes seen feeding on grassland up to ten miles from the nearest rookery. On the Dee side of the hills the only rookery above Ballater is a small one at Invercauld, and the numbers of adult Rooks in these flocks are far greater than in this rookery. In recent years Chaffinches have been seen at the skilift station on Cairngorm at 2500 ft, feeding on crumbs and scraps of waste food, although this place is fully a mile from the nearest pine trees.

Streams and lochs

Common Sandpipers breed along the main streams and by lochs at 1500-2400 ft, and one pair (occasionally two) breeds 3000 ft up at Loch Etchachan, and at 2850 ft at Loch nan Cnapan (Perry 1948). Nethersole-Thompson found a pair nesting at a tarn at over 3500 ft in 1961 west of Loch Etchachan. Dippers have a similar distribution, except that they also live on smaller streams and regularly visit the Pools of Dee at 2700 ft or even the Wells of Dee at 4000 ft. They are very hardy and stay all winter in the hills up to 2000 ft, even when the streams are almost completely covered in ice and snow. It is common to see a Dipper flashing in and out of small holes in the snow over the streams, and even giving snatches of song. Occasional pairs of Grey Wagtails live in summer along the larger streams up to 2000 ft, and Nethersole-Thompson once found a nest at 2500 ft.

There are regular colonies of Common Gulls in the arctic-alpine zone at 2850 ft at lochs in the west Cairngorms and at 2950 ft at Loch nan Eun on Lochnagar. A few Black-headed Gulls bred in 1958 at one west Cairngorm loch, and they nest regularly at small lochs at 2000 ft south of Carn a' Mhaim and at 1700 ft near the tree line in upper Glen Derry. Both species may be seen visiting the highest plateaux in summer, where they pick up ground beetles and catch moths in mid air.

A few Mallard and Teal breed up to 2000 ft near most moorland lochs and ponds in boggy ground, and occasionally near quiet-flowing parts of the larger streams. An occasional pair of Wigeon and Redshank also nests among ponds on boggy ground in the glens up to 1600 ft, and I once saw a pair of Moorhens with young at this altitude near Loch Builg.

A few Goosanders breed in holes in trees or rocks up to 1700 ft along streams, and feed in pairs on the streams but sometimes communally on pools up to 2000 ft. Each pair lives along part of a major stream such as the Einich or Derry, but the nest may be up a small side stream. Some glens have only one pair but others two or three. They are persecuted

everywhere, and the broods are often shot by keepers and stalkers when they move down to the larger rivers. In spite of this the number returning each spring is fairly constant.

The scrub zone

Hardly any of the scrub zone above the tree line now exists, owing to burning and grazing. Tiny patches of dwarf birch still grow on some wet bogs, dwarf willow on bogs and on rocky stream banks, and juniper here and there on dry ground. West of Morven near Ballater, extensive stands of 2-3 ft juniper growing up to 2000 ft, with scattered bushes much higher, show what this zone might have been like. It has variety, shelter, colour and many breeding Willow Warblers, Meadow Pipits and Ring Ouzels.

The tree line

The tree line of the pine forest is 1800-1850 ft in Glen Derry, 2000 ft at Creag Clunie and Glen Quoich, and 2100 ft at Creag Fhiachlach, with occasional trees higher up; the birch-juniper woods on Morrone go up to 2150 ft. On cliff ledges and rocky gorges of streams, many 6-10 ft pines, larches, birches, aspens and especially rowans grow up to 2250 ft, isolated trees to 2500 ft, occasional scrubby trees a foot high up to 3000 ft, and in two cases up to 3400 ft for a pine and 3500 ft for a larch. This tree line is not appreciably lower than in prehistoric times. Roots of pine (sometimes with birch and juniper also) are abundant in nearly all peat bogs up to 2000 ft, but most bogs above 2200 ft have none. Two cases at 2500 ft and one at almost 2700 ft refer to only a few roots in very sheltered places where the arctic-alpine vegetation at present does not go below 3000 ft. Probably these were isolated trees such as still occur above the normal tree line. Unfortunately the present forests are small remnants owing to burning and to severe browsing of young trees by red deer, and most of the once-forested ground below 2000 ft is a treeless heather moor.

Near the edge of the pines, woodland birds are sometimes seen out on the nearby hill. Capercaillies are often on the moor edge in summer and autumn, and Black Grouse and Woodpigeons even more, sometimes up to 2300 ft on hillside bogs and berry patches a mile from the nearest trees. Flocks of Bullfinches are often in long heather in winter up to $\frac{1}{4}$ mile from the trees. Occasional Wrens breed on sheltered stream banks or rocky gorges up to 2000 ft and up to two miles from the nearest woods, but there are far more in the woods. Similarly most Woodcock breed in the woods but some nest up to $\frac{1}{4}$ mile from the trees. A few Starlings breed in holes in trees in the old pine forest up to 1700 ft in places,

and may be seen occasionally on the nearby moors up to 2200 ft. In June 1964 Nethersole-Thompson watched a Starling which spent the night on a scree ridge at about 3700 ft. Willow Warblers breed in scrub or long heather up to a mile from the woods. Tewnion (1953) once saw one singing among a few birches on crags at 2000 ft in Glen Geusachan, two miles from the nearest wood, and Nethersole-Thompson has heard cocks singing in the few straggling trees under Creag an Leth Choin in the Lairig Ghru.

Crows breed up to the tree line but often occur in the treeless glens and lower hills, and occasionally fly up to the arctic-alpine zone. They take many grouse eggs and some Ptarmigan eggs, but feed mainly on insects in summer. They do not regularly hunt the high ground on the Dee side of the Cairngorms but in recent years have increasingly hunted the Spey side. These Crows are a mixture of Hooded, Carrion and every kind of intermediate. They leave the upper valleys in winter, moving to the lower valleys and woods below 1500 ft where they have large communal roosts, one, for instance, near the Linn of Dee.

Migrants

Many birds move over the Cairngorms on migration. Grey Lag Geese regularly and Pink-footed Geese occasionally fly over in flocks of up to 100 through passes such as the Lairig Ghru, Lairig an Laoigh and Glen Einich, but may go right over the highest ground in fine weather. On exceptional days in autumn a continual succession of Greylag flocks moves south, numbering 500-1000 birds in a single afternoon. They occasionally land on Loch Builg and Loch Einich, along with small flocks of Whooper Swans. Occasional Goldeneye and Mallard stop briefly on Loch Etchachan and other high lochs. Gordon (1951) once saw a small flock of Teal on the Pools of Dee, and in June 1950 Nethersole-Thompson heard Teal and Oystercatchers flying through the Lairig Ghru at night from a camp on the plateau above. A few Lesser Black-backed Gulls sometimes cross over the hills through the passes at 3000 ft.

More unusual birds seen only once include two drake Gadwall at Loch Builg in October, a White-fronted Goose flying west at Derry Lodge in October, a Jack Snipe shot at 2100 ft near there in October, a Black-throated Diver on Loch Etchachan in June (V. C. Wynne-Edwards *in litt.*), a Sand Martin there in July, and a Rook flying south at 2400 ft at Cairnwell in late April. Nethersole-Thompson once saw a Curlew which spent several days on boggy ground near Lochan Buidhe at 3500 ft on Ben MacDhui, and Gordon (1921) found a Lapwing dead near the top of Ben MacDhui

after the winter, presumably a bird that had been overcome on migration.

Scores or even hundreds of Swifts may often be seen over the highest tops during some days in summer, and flocks of Swallows and House Martins sometimes fly south over the Cairngorms in autumn, generally through the passes. Brock Nethersole-Thompson watched a Swallow over a tarn at 3700 ft in June 1964. Other birds have occasionally been seen in the arctic-alpine ground just after the first big thaw in March, such as an odd Robin, Greenfinch, Yellowhammer and Bullfinch, and Gordon (1951) once found a Robin in April at the Pools of Dee, lying dead on very deep snow. The bodies of a Robin and a Bullfinch, both of the British race, were picked up on a snowfield at 3700 ft on Braeriach in June 1941 (Nethersole-Thompson *in litt.*).

The main migrants are Fieldfares and Redwings. Flocks of hundreds are common on the moors and hills every autumn and many can be heard passing over at night. Most of those that come to ground occur below 3500 ft but some stop briefly right up to the summits. Most move on after a day or two, often to be replaced by further arrivals. They quickly eat any berries left by Ptarmigan, Red Grouse and Ring Ouzels, and their droppings are deeply dyed and full of berry pips, but they also eat many insects while on the hills. A few Skylarks also fly south over the hills at this time, and flocks of up to 10 Pied Wagtails.

Natural hazards and human pressures

The hill birds are in no danger of extermination by natural predators. Although foxes and eagles are commoner than on preserved grouse moors further down Deeside or in Angus, grouse and Ptarmigan maintain as high breeding stocks on some hills near Braemar as anywhere in Scotland, and predation on Ptarmigan does not appreciably reduce the birds' production of young. None of the Snow Buntings that Nethersole-Thompson knew so well disappeared in summer.

Human pressures are more serious. Although egg collectors may have been a nuisance to the occasional ornithologist doing a detailed study it is very unlikely that they have had a lasting effect on any of the Cairngorm hill birds. On average, only about one pair of eagles in ten is robbed on the Dee side of the Cairngorms (Watson 1957b), an insignificant number considering the big surplus of young reared. Egg collecting is even more uncommon and negligible with Ptarmigan, and Nethersole-Thompson considers it had no effect on Snow Bunting and Dotterel populations. Eagles on the Spey side of the Cairngorms have suffered heavier egg robbing in the last few years but the number of pairs has not

gone down during these years, nor is it likely to do so considering the surplus produced in districts nearby. Some of the stalkers in the Cairngorms dislike egg collectors. One day I saw a collector being hounded down the glen by the stalker and warned in no uncertain terms of what would happen to him if he ever dared to show his face again, all because he was seen lifting the eggs of the only local pair of Oystercatchers!

Shooters are no threat to the hill birds, and probably never have been. Ptarmigan were often shot in the past, but Ptarmigan shooting is no longer fashionable and shooters have become lazier. Few or no Ptarmigan are shot in most years now and the population could stand much heavier exploitation.

I have known of only five cases where an eagle was kept so long off its nest that the eggs became cold and did not hatch; three involved men cutting trees, one an artist unwittingly painting a scene near the eyrie, and one an ornithologist who should have known better. These hazards are of no major importance, and they have not increased, although more walkers and climbers visit the Cairngorms every year. Fortunately nearly all eagle eyries are in pines well off roads or tracks, or in broken cliffs of no interest to rock climbers. Birdwatchers are not a serious threat to the eagle but may become so if they increase at the present rate for another twenty years. The main danger will be chilling of the eggs on cold days, due to people hanging about too long near the nest. The worst that could conceivably happen is that continual disturbance might eliminate a few pairs, especially on the Spey side of the hills, but this would have no noticeable effect on the eagle stock of Scotland.

Snow Buntings, Dotterel and other hill birds are in no danger from climbers and walkers, because these birds pay little attention to people walking past and because walkers seldom stop long when they see them. Moreover, Snow Buntings in the arctic breed close together in village buildings or in nearby rubbish tips and become very tame. The wintering flocks in Scotland also become tame wherever they see people every day. Flocks of tame Snow Buntings occur every year at the cafés and car parks near skilifts, and are often given pieces of food by the skiers. After the breeding season Scottish birds are often seen around the summit cairns, where they find crumbs left by walkers, and they often pay no attention to a man 10 yards away. Moreover the Scottish breeding birds are so scarce that very few people will ever exert the energy needed to find them.

Dotterel may be in more danger, simply because they are so unwilling to move away, and also because some of the best

Dotterel areas are very near present and possible future skilifts. The most disturbing news from 1965 was of a group of birdwatchers throwing stones at Dotterel so that they could get better photographs, and there have been cases in past years and recently where photographers have kept Dotterel off chipping eggs for hours. On grassy ground their nests are not difficult to find and broods even easier. However, Dotterel stocks fluctuate from year to year as they have done for decades, and have not shown a sustained decline over recent years. Breeding success is still good on hills in the Grampians visited every summer by many walkers and a few birdwatchers, but no evidence on breeding success is available for the last few years from the Cairngorms or any other area frequented by large numbers of birdwatchers and walkers from skilifts. Such evidence should be obtained before birdwatchers are stopped from going there, but the tiny hooligan minority should meantime be warned to behave more responsibly.

There is good evidence that Ptarmigan are unaffected by the enormous increase in the number of skiers and walkers near skilifts (Watson 1965a). Their breeding stocks have remained as high as on nearby undisturbed hills, and the birds become tame and pay little attention to people. I once thought that walkers might disturb and scatter broods on windy days, but in fact few people walk far, let alone on windy days, and breeding success has been no worse than on undisturbed places nearby.

Loose untrained dogs may kill nesting Ptarmigan and Dotterel and their chicks, but fortunately they seldom find them. Moreover, loose dogs run about almost daily near the Cairnwell skilift in summer and on Cairngorm, yet Ptarmigan have bred no worse there than on other hills, and there has been no reduction in the adult stock during the summer. In recent years Crows have taken to visiting the arctic-alpine ground on the Spey side and have eaten some Dotterel and Ptarmigan eggs (Nethersole-Thompson in Bannerman 1963). However, Ptarmigan stocks have remained as high on the Spey side as on the Dee side, where Crows are still rare visitors to the high hills. Hence there is no evidence as yet of any important damage by tourists to the hill birds, and considerable evidence against this.

However the main threat may be indirect, affecting the birds by way of damage to the vegetation. The Cairnwell skilift is a tribute to those who built it, because damage was slight and the ground has already almost completely recovered. However the T-bar tow there has exposed much bare peat which will take longer to recover. Most of the damage at Cairngorm was caused during the building of the lifts,

tows, roads and chalets, and unfortunately there has been little or no recovery. The areas near the skilift station are bare of vegetation owing to trampling by summer visitors, and some vegetation between there and the nearby summits also has been partly killed. Nevertheless all this bare gravel and trampled vegetation, while undoubtedly an eyesore, has affected only a minute part of Cairngorm or Cairnwell and so has not yet affected the hill birds. Further increases might be prevented by making good tracks for people to come downhill along the line of the skilifts, and lines of prominent cairns to other places commonly visited in summer. The line of cairns recently put up on the Cairngorm-Ben Mac Dhui route to prevent people getting lost will have a long-term effect to the good by channelling the increasing numbers of walkers. The more serious damage from building roads and lifts could probably be repaired by planting pioneer species of plants but this might take some years.

The Cairngorms-Upper Deeside-Upper Angus area is the only part of Britain where the breeding success of Golden Eagle and Peregrine has not declined (Watson unpublished, Ratcliffe 1965), possibly because they feed largely on moorland prey there and rarely come in contact with animals from farms. Nevertheless in 1964 an eagle which had been on the lower Cairngorms for at least six months contained small amounts of insecticide residues (Watson & Morgan 1964). An unhatched Ptarmigan egg that I found in 1965 on Ben Mac Dhui, where there are only a few stray sheep, had no residues (N. W. Moore *in litt.*). Hence the effects of toxic insecticides in the Cairngorms are not yet proven and probably unimportant.

To sum up, my view is that the outlook for these hill birds is good; but I would be the first to admit that a close watch needs to be kept and hard evidence found in the next few years, just in case there is trouble. These years will see a great increase of tourists, following massive building of hotels near Aviemore. Looking at the hill birds could become a big attraction for many of these people, and the Nature Conservancy, the Scottish Ornithologists' Club and the Royal Society for the Protection of Birds must try to find ways to permit this without jeopardising the same opportunities for future generations.

Acknowledgments

I am grateful to D. Nethersole-Thompson who allowed me to use many unpublished observations, including those from a book still in press. Dr D. Jenkins and Prof. V. C. Wynne-Edwards made useful comments.

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The Scottish Ornithologists' Club

ANNUAL CONFERENCE

The 19th Annual Conference and 29th Annual General Meeting will be held in the Hotel Dunblane, Perthshire, on 21st-23rd October 1966. In view of the Selective Employment Tax **all hotel prices are provisional.** Bookings should be made direct with the hotels. The full programme will be given in the next issue of "Scottish Birds." The registration fee will be 10/-, and the Annual Dinner 25/- for those not staying in the Hotel Dunblane (both to be paid on arrival).

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Hotel Dunblane (Hydro) (Tel. 2551). Special Conference charge £7 (or 70/- a day) including tips, covering bed and all meals (except tea on Saturday afternoon) from Friday dinner to Sunday lunch, after-meal coffee, and the Annual Dinner (with wine or soft drinks). For less than a full day bed and breakfast is 40/-, lunch 13/6d and dinner 17/6d.

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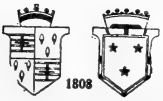
Some years ago the late Miss Rintoul and Dr Baxter each bequeathed to the Club a sum of £1000, from which the income is to be used for the advancement of Ornithology. These generous donations have been of great value to the Club over the intervening years. They have formed a reserve which has given it confidence in developing its activities and interests.

The Council has now decided to encourage similar provisions by setting up an endowment fund to be known as The S.O.C. Endowment Fund. It will be administered by the Council in terms of the Constitution and will again be used for the general purposes of the advancement of Ornithology. Any conditions attached to gifts or bequests will of course be observed, but in addition the Fund will be divided into two parts—in the one case only the income will be expendable, but in the other both capital and income may be expended.

The Council will very much welcome contributions to the Fund. The first, the proceeds of the recent lecture in the Usher Hall by George Waterston amounting to £75, has already been received.



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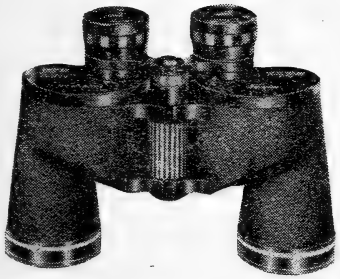

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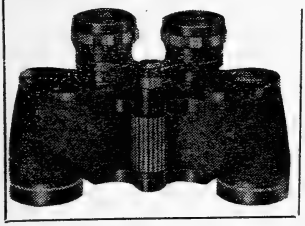

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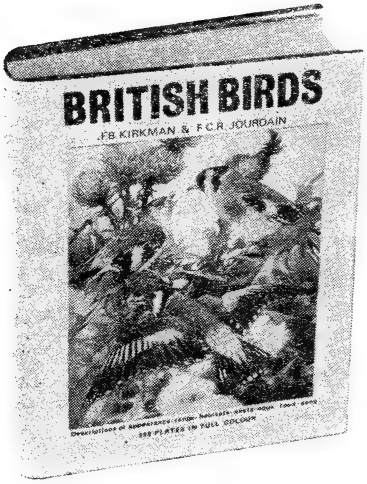

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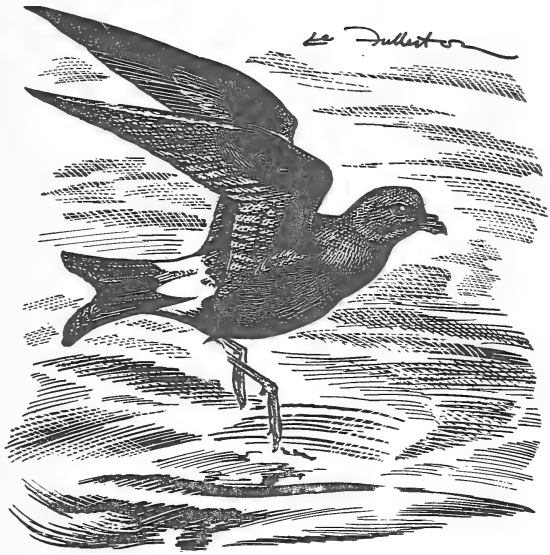

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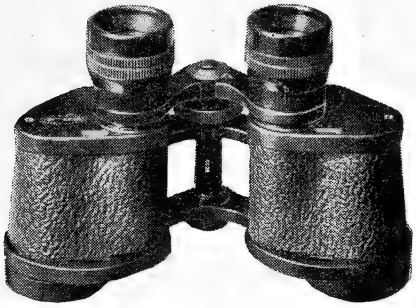

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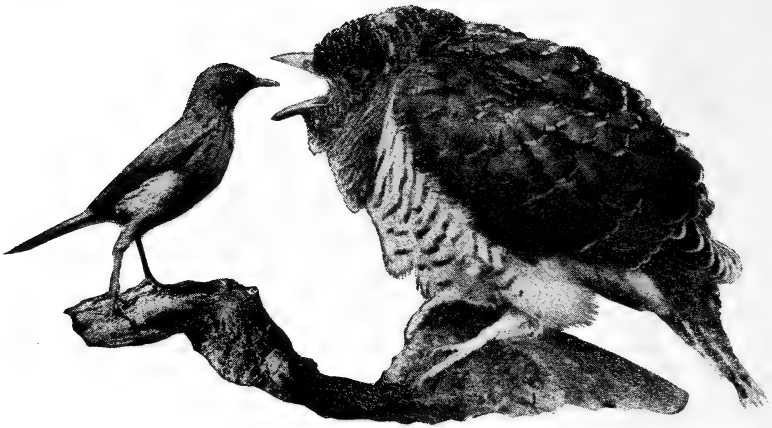

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Edited by Andrew T. Macmillan, 12 Abinger Gardens, Edinburgh 12.
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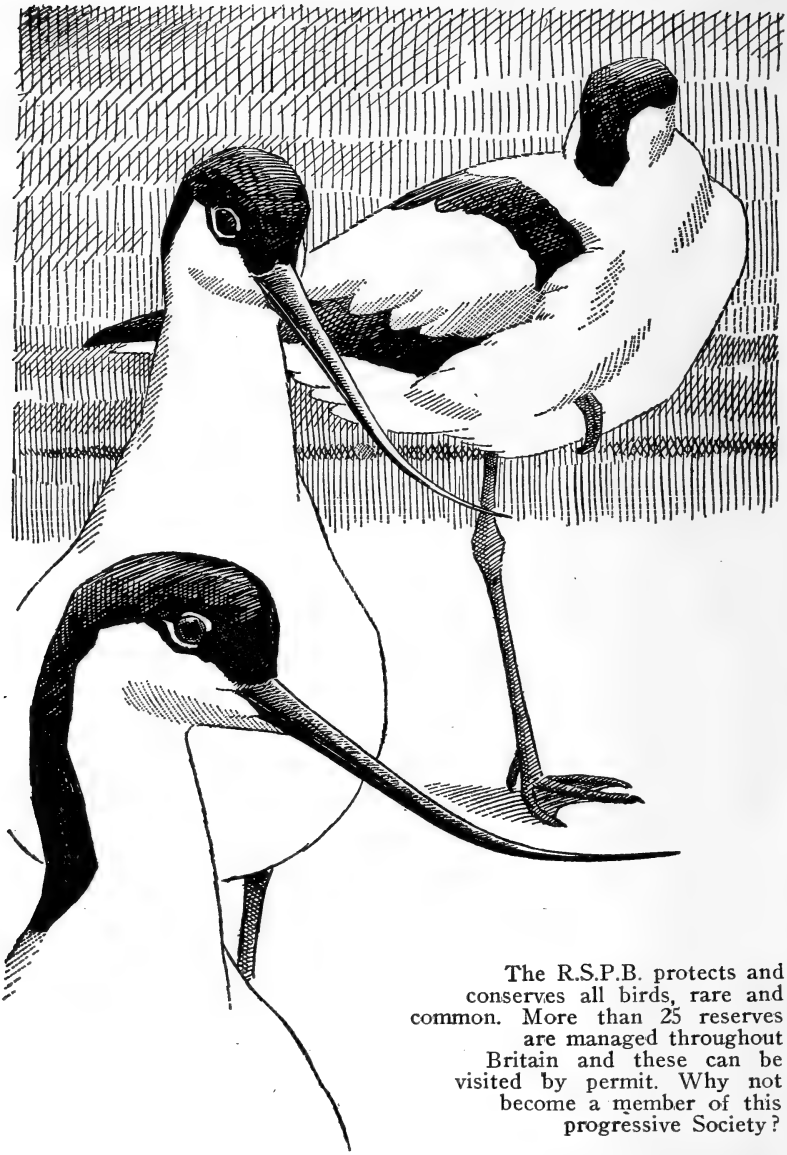

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Volume 4 No. 3 **Autumn 1966**

Edited by A. T. MACMILLAN with the assistance of D. G. ANDREW, T. C. SMOUT and P. J. B. SLATER. Business Editor, T. C. SMOUT.
Cover Design (Leach's Petrel) by LEN FULLERTON.

Editorial

Scottish Bird-Islands Study Cruise. By all accounts the cruise was an enormous success—a fitting reward for the tremendous amount of work put into it. We plan to have a full report and pictures in our next issue.

Protection of Birds Bill. On the dissolution of Parliament for the General Election the Protection of Birds Bill was automatically lost, along with various other bills that could not be completed before the end of the session. It now has to pass through both Houses again and it is to be hoped that this will mean delay rather than complete frustration.

Bounties for Cormorants. It is notorious that bounty schemes are unsatisfactory as a method of control. The aim is to wipe out the pest but the effect may well be to pay heavily for a crop of surplus individuals which would have perished anyway from natural causes at some other season. Sometimes bounties are paid on wrongly identified species, and suitable bodies (or beaks, or feet) may even be imported from neighbouring areas on a profit-sharing basis. Almost certainly the effort is applied unevenly and at the wrong season for effective control.

Last year the River Tweed Commissioners paid out £195, 5/- for 781 "cormorants" destroyed. It is an encouraging comment on the greater understanding of predator-prey relationships that this year the bounty scheme has been dropped. On the basis of research by Dr Derek H. Mills the Commissioners have concluded that damage done to the fisheries by the Cormorants is not enough to justify the cost of the scheme.

Ospreys and the R.S.P.B. in Speyside. In 1966 the Ospreys came back for the eighth successive year to their Loch Garten eyrie and for the fourth successive year to their other site. Unfortunately both nests were destroyed by gales on 27th-28th April when there were three eggs in the Loch Garten eyrie and one in the other. The same thing happened three years ago at Loch Garten.

An excellent booklet with a fine cover painting by Donald Watson has been produced about the Ospreys, including 1959/65 statistics on breeding (13 fledged) and viewing (141,500 watched). It is *Ospreys in Speyside*. By George Waterston. 1966, R.S.P.B. booklet. Pp. 40; photographs and line drawings. 5/-.

In April the R.S.P.B. announced the appointment of Wing-Commander Dick Fursman as their full-time representative in Speyside. As well as continuing to supervise Operation Osprey he will be responsible for liaison with landowners, developers and the public. He will watch the effects of the extensive tourist developments in the area and generally put forward the case for bird conservation. His address is The Boathouse, Aviemore (telephone 223).

Balranald Bird Reserve. A fine 1500-acre R.S.P.B. reserve has been established in North Uist by agreement with the landowners and with the crofters of the township of Hougary, which forms part of the reserve and where traditional methods of land use still continue. The reserve includes the small offshore island of Causamul and a variety of typical Hebridean habitats—Atlantic beaches, sweeping white sands, dunes, big stretches of machair (meadow land) with abundant flowers and Corncrakes, and a variety of lochs and bog.

Causamul forms a natural refuge for a large part of the winter population of surface-feeding ducks frequenting Balranald marsh, and it is a breeding station for a small number of grey seals. Breeding birds of special interest at Balranald include sea-level Dunlin and also Red-necked Phalaropes. The R.S.P.B. intends to put up observation hides from which these and other species may be watched without disturbance. Even this remote area is not beyond the limits of tourism and it is good to see plans being made for its future in good time. Visitors should contact the R.S.P.B. warden in Hougary. For pictures and further details see *Birds* 1: 71-73.

Scottish Wildlife Trust reserves. A good deal of unspectacular spadework in the early days of the Scottish Wildlife Trust is now starting to produce visible results; though it should never be forgotten that some of the most valuable influence for wildlife conservation is achieved by advice and discussion behind the scenes. To coincide with National Nature Week at the end of April the Trust was able to announce its first three reserves, set up by agreement with the owners.

These were Enterkine Wood, a varied and well managed woodland in Ayrshire; 190 acres of loch and surrounding amenity woodland at Duns Castle, Berwickshire; and the small Hare and Dunbog Mosses at 900 ft near Selkirk. Later another fine piece of unspoiled wetland at Gordon Moss,

Berwickshire, was added to the list. The establishment of these reserves does not necessarily mean any great changes in their use but it does guarantee that they will be managed with the interests of wildlife in mind.

Nature trails. At the new Enterkine Wood reserve the S.W.T. laid out a nature trail and opened it to the public for National Nature Week. This gentle form of practical education is becoming very popular. Various trails have been established in Scotland, including a splendid long one round Loch an Eilean in Speyside and one at the Hermitage of Braid and Blackford Hill in Edinburgh.

The trail is marked with numbered posts or rocks and one follows it with a booklet (unless there are notice boards instead) to point out interesting features of the flowers, birds, mammals, rock formation and suchlike, preferably with a few facts that may be checked on the spot. It is as if one went round with the experts who planned the trail. Somehow the whole thing becomes an adventure that comes to life when one has to explore it on the spot for oneself.

The trail can keep people on routes where they will do least harm to the habitat and at the same time show them some of the highlights of the area. A fine new trail has just been opened at Yellowcraig in East Lothian. There is a big car park and now a caravan park, but instead of visitors being told what not to do they will be able to get a booklet and find out for themselves just what a fascinating area it can be in quite unexpected ways.

The "Handbook" and the "Field Guide." Few ornithologists would deny that the most valuable general work of reference on the birds of this country is *The Handbook of British Birds.* Written over 25 years ago it is still extraordinarily useful. Likewise, for a really helpful pocket guide to bird identification *A Field Guide to the Birds of Britain and Europe* is even more obviously the first choice—and not just in Britain but throughout western Europe as well.

For some years the *Handbook* has been out of print, but it is to be reprinted this autumn to meet the steady demand for copies. The long-awaited revised edition of the *Field Guide* is now out. Some birdwatchers go through one a year but even those still using their 1st-impression 1954 copies will want this new edition. The changes are subtle but important—better methods of identification for difficult species, entirely new distribution maps, and more illustrations of more species.

Post free from the S.O.C. Bird Bookshop the 5-volume *Handbook* costs £4, 4/- a volume (£21 in all) and the *Field Guide* 30/-.

Current literature. Recent papers of special interest to Scottish ornithologists include:

The Fulmar population of Britain and Ireland, 1959. James Fisher, 1966. *Bird Study* 13: 5-76. A meticulous list of colonies gives a new base for assessing the rate of increase; this has slowed, perhaps because of the smaller quantity of fish guts thrown overboard now. Evidence of Fulmar exploitation at St Kilda in Viking times is discussed.

Post-mortems of Peregrines and Lanners with particular reference to organochlorine residues. D. J. Jefferies and I. Prestt, 1966. *Brit. Birds* 59: 49-64. Two Scottish birds probably died of other causes.

An analysis of recoveries of Great Skuas ringed in Shetland. A. Landsborough Thomson, 1966. *Brit. Birds* 59: 1-15. Based on 119 recoveries, in spite of the bird's pelagic mode of life.

The natural history of a population of Guillemots (*Uria aalge* Pont.). H. N. Southern, R. Carrick and W. G. Potter, 1965. *J. Anim. Ecol.* 34: 649-665. Deals with colonies in east Scotland.

Distribution of bridled Guillemots in east Scotland over eight years. H. N. Southern, 1966. *J. Anïm. Ecol.* 35: 1-11.

Movements of Woodpigeons in north-east Scotland. D. Robertson and G. M. Mackintosh, 1966. *Scot. Agric.* 45: 68-71. Discussion of November flocks and recoveries of ringed birds showing local movements only.

Movements of British Robins as shown by ringing. D. W. Snow, 1966. *Brit. Birds* 59: 67-74. Includes Scottish data.

Orkney for the bird watcher. Eddie Balfour, 1966. *Birds* 1: 45-47. Useful general review.

Ornithological stamps. The Post Office used to insist that postage stamps should be utilitarian, and was strongly opposed to commemorative issues: such things were all very well for everyone else, but too degrading for the inventors of the Penny Black. Now it has flown to the opposite extreme and issues pictorial stamps at regular intervals during the summer tourist season, even without commemorating anything, and sometimes several different designs of the same face value in a block (not to mention local varieties and experimental paper treatments). Philatelists may rebel; but the attractive 8-colour 4d series of Blackbird, Robin, Blue Tit and Black-headed Gull, issued on 8th August 1966, should please most birdwatchers as evidence of how high a place their hobby now takes in the affairs of the country.

Sex and age ratios and weights of Capercaillie from the 1965-66 shooting season in Scotland

F. C. ZWICKEL

Nature Conservancy Unit of Grouse and Moorland Ecology, Natural History Department, Marischal College, Aberdeen

Sex and age ratios are important parameters to an understanding of the population dynamics of a given species. Helminen (1963) has presented a comprehensive review of autumn sex and age ratios for a large series of Finnish Capercaillie *Tetrao urogallus* but no such data have been published for Scottish birds. During the 1965-66 shooting season I examined 117 Capercaillie bagged by hunters in northeast Scotland and since it is doubtful that this study will be repeated in the immediate future the data are presented here. When relevant, I have included observations from field studies conducted during the autumn and winter of 1965-66.

I was able to obtain weights of 109 of these birds and include these also. An analysis of the crop contents of 99 of the birds has been presented elsewhere (Zwickel 1966).

Methods

All birds were shot between 22nd October 1965 and 27th January 1966 and were examined either at the time of the hunt (19) or at game dealers (98). The determination of sex was no problem because of the striking sexual dimorphism of Capercaillie (Thomson 1964). Ages were determined on the basis of the shape of the two outer primaries (Helminen 1963) and in most cases were checked by probing of the bursa of Fabricius. Birds were classified into four sex and age categories; adult male, adult female, first-winter male, and first-winter female—first-winter birds being those hatched in 1965 (5-8 months of age).

All birds were weighed on spring balances read to the nearest 50 gms and all had crops and viscera intact. Most (100) were weighed within three days or less of the date of kill while the remainder (all from October) had been killed approximately 11 days before being examined.

I have used the 5% level of probability for determining significance or non-significance in all statistical analyses.

Results

A summary of the number of birds recorded in each sex and age category and the general areas where they were taken is presented in table 1.

Table 1. Number of Capercaillie in each sex and age category, by area of kill

	Perthshire	Aberdeenshire and Kincardineshire	Inverness-shire and Morayshire	Total
Male				
Adult	16	6	10	32
First-winter	6	1	3	10
Female				
Adult	21	22	17	60
First-winter	7	1	7	15
	50	30	37	117

The samples are too small to make meaningful statistical comparisons between regions and most of the following analysis will therefore be concerned with only the total numbers recorded in the different sex and age categories. The birds examined were killed in the following months: October—9, November—9, December—45, January—54.

Sex ratios. There is no statistically significant difference between sex ratios in the two age classes. Since this is so, the data have been combined, giving a ratio of 42 males to 75 females (56:100). This differs significantly from a 100:100 sex ratio.

In the course of field studies, principally in Glen Dye, near Banchory (Zwickel 1966), I identified the sex of 183 birds flushed between 13th September and 31st March; 91 were males and 92 females. This does not differ significantly from a balanced sex ratio (nor do any of the samples for particular months) but does differ from the sex ratio recorded for the kill. If my field observations are representative of populations in northeast Scotland the unbalanced ratio found in the kill must be caused by some bias associated with shooting. Such bias might be caused by the large difference in size between the sexes (Koskimies 1958)—males may be able to carry shot better than females—or by some difference in behaviour between the sexes. For instance, I have found in my winter studies that males flush at a significantly greater mean distance from an observer than do females; 190 feet for males and 120 feet for females. It is also possible that males fly higher or faster than females, a suggestion sometimes made by sportsmen.

The preponderance of females in the Scottish kill is different from that found by Helminen (1963) in Finland. He found more males than females. He reports, however, that Finnish hunters hunt selectively for males. Having observed three shoots in Scotland I can see no such selection on the part of Scottish sportsmen. One male and 12 females were taken on these shoots, yet I saw 20 males and 21 females

flying by the hunters and this does not differ significantly from a balanced sex ratio.

Age ratios. Because there is an indication in table 1 that fewer young were produced in the Aberdeenshire-Kincardineshire area than in the other areas from which samples were obtained, I have done a chi-square analysis of these data. The differences in the proportion of first-winter birds recorded in the different areas are not statistically significant and I have therefore combined the figures (there was also no significant difference between months). The percentage of first-winter birds of each sex found was as follows: males—24%, females —20%. There is no significant difference between the sexes, and the combined percentage of first-winter birds in the kill was 21%. This is very low when compared to similar data for other gallinaceous birds, as presented by Hickey (1955), or to autumn age ratios from Finnish Capercaillie (Helminen 1963).

Annual production is often expressed in terms of young per breeding female. The data in table 1 give 0.4 young per adult female. If the population is assumed to have a balanced sex ratio and the number of first-winter birds is so adjusted, then this figure becomes 0.5 young per adult female. These figures are very low for most gallinaceous birds and indicate that Capercaillie had a poor reproductive season in 1965, a suggestion also made by several gamekeepers with whom I talked.

Weights. A summary of mean weights and the range in weights within the different sex and age categories is presented in table 2. Adults were significantly heavier than first-winter birds in both sexes.

Table 2. Mean weights and range in weights of Capercaillie of different sex and age categories

	Males		Females	
	Adult	1st-winter	Adult	1st-winter
Number in sample	27	10	59	13
Mean weight - gms	3920	3155	1755	1608
Standard error - gms	49	52	15	31
Weight range - gms	3400-4400	2900-3450	1500-1950	1400-1800

The mean weight of first-winter males is 80% that of adult males and the mean weight of first-winter females 91% that of adult females. These data suggest that females grow faster than males, and are very similar to like figures presented by Koskimies (1958) for Finnish birds (82% and 92%, respectively).

Koskimies also reported a large difference in mean body weight between male and female Capercaillie. In my sample the mean weight of adult females was 45% that of adult

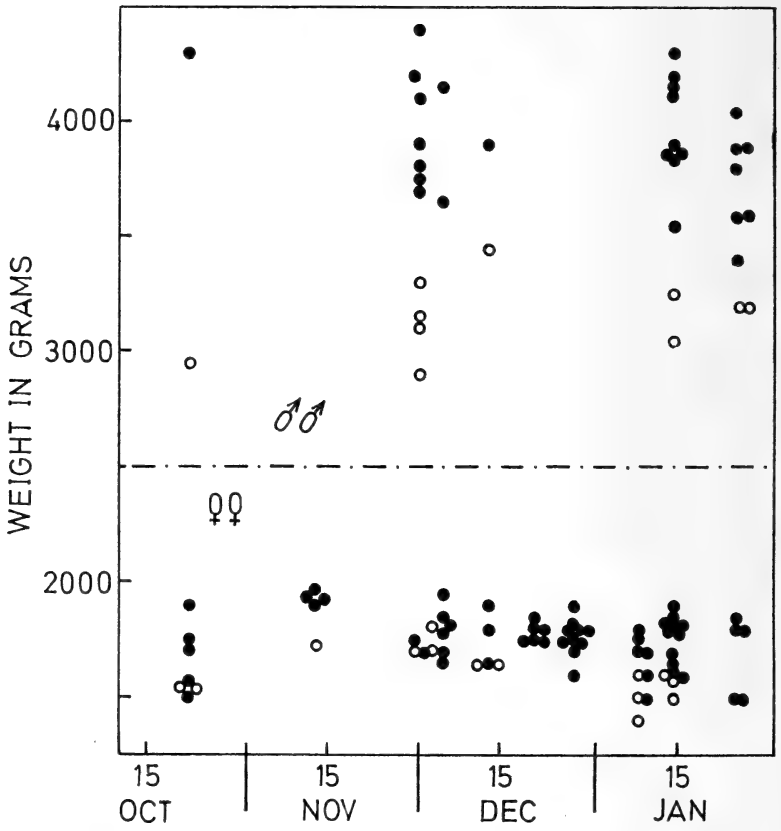

FIG 1. Individual weights of Capercaillie plotted by date of kill. Males are above the dotted line, females below; adults are shown by closed circles, first-winter birds by open circles.

males and the mean weight of first-winter females was 51% that of first-winter males (Koskimies found adult females to be 48% the weight of adult males).

I checked too few birds in each month, in most sex and age categories, to test for monthly changes in mean weights. I have, however, plotted the individual weights by date of kill in fig. 1. These suggest that peak winter weights were reached in November or early December and that there was a gradual decline in all groups, except possibly first-winter males (where samples are very small), from this time through January. Mean weights of adult females for December (1773±10 gms) and January (1725±26 gms) where samples are reasonably good, are significantly different from each other. Koskimies (1958) has shown that Finnish Capercaillie reach a peak weight in November, with a decline in December.

The data shown in fig. 1 support his findings and suggest that this decline continues into January.

The mean weights of Finnish birds, as reported by Koskimies, appear to be slightly higher than those found here. Koskimies had no data from January, however, so that the mean weights of the Scottish birds may be influenced by inclusion of data from the lighter birds from this month.

Acknowledgments

This study was supported by the National Research Council of Canada. Facilities for study were provided by Professor V. C. Wynne-Edwards, University of Aberdeen, and by the Nature Conservancy. The following persons assisted me with the collection of data: T. B. Band, R. Slaughter and G. Mitchell, game dealers at Perth, Cromdale and Letham respectively; Col. J. W. Nicol of Ballogie; D. McLeod, S. McIntosh and R. Fraser, gamekeepers at Finzean, Learney and Ballogie estates respectively; and G. W. Johnstone, Natural History Department, University of Aberdeen. Field studies were done on the Glen Dye and Seafield-Strathspey estates and on Forestry Commission lands at Blackhall, Culbin and Rannoch. G. W. Johnstone, R. Moss and A. Watson made valuable criticisms of the manuscript. I am very grateful for the help given by all these persons and groups.

Summary

A total of 117 Capercaillie from the 1965-66 shooting season were examined for sex and age ratios in northeast Scotland. Weights were obtained from 109 of these birds.

A sex ratio of 56 males to 100 females was found. This unbalanced ratio appears not to reflect that of birds in the wild but appears to be caused by biases relating to shooting.

Only 21% of the birds were in their first winter. This is very low when compared to age ratios reported for most gallinaceous birds and suggests that Scottish Capercaillie had a poor reproductive season in 1965.

The mean weight of adult females was 45% that of adult males, and the mean weight of first-winter females was 51% that of first-winter males. Mean weights of first-winter birds suggest that females develop faster that males, in terms of body weight. Birds appear to reach a peak weight about November or early December, with a gradual decline starting in December and continuing into January.

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An investigation into the recent decline of the Barn Owl on an Ayrshire estate

DOUGLAS N. WEIR

Introduction

The area studied is a 1600 acre agricultural and sporting estate and a further 400 acres of adjacent ground in north Ayrshire. Some notes on raptors have been made here ever since 1947. There is a wide variety of farm, marginal and woodland habitats in this area and nearly 70 species of birds nest in most years. This paper investigates the change in status of the Barn Owl in the area over the period 1954 to 1965.

I am most grateful to my father, Viscount Weir of Eastwood C.B.E., for this and all my opportunities to study birds here and to all the estate staff and others who furnished much of the information needed for this investigation. My thanks are also due to Dr V. P. Lowe of the Nature Conservancy whose valuable criticisms led me to revise the paper completely.

Nest sites and ranges, and history of the decline

In 1954 three pairs of Barn Owls were known to breed, all using sites which appeared to have been occupied for many years. Pair 1 bred in a pigeon loft above a stable, part of a range of buildings around a courtyard. The birds were known to hunt the extensive lawns and a large walled garden, woodland edges and roadsides and nearby fields and paddocks.

Pair 2 also bred in an old pigeon loft, in farm buildings $1\frac{1}{4}$ miles north of the first pair. They were known to hunt the farmyard and surrounding fields, and favoured two small glens, partly wooded with thorns and containing running water.

About $1\frac{3}{4}$ miles NE of the first pair and the same distance SE of the second, pair 3 nested in the rocky side of a wooded pit, about 20 yards long and 20 feet deep. Their known range covered young conifer plantations and woodland clearings and they often hunted four rushy fields.

Many observations over the years showed that the owls rarely occurred more than $\frac{1}{2}$ mile from the nest sites, so that there appeared to be very little overlap in the ranges, either in summer or in winter. Dates of the last known nests and last sightings within their presumed ranges are given in table 1.

Table 1. Last known nests and sightings of Barn Owls

Pair No.	Last known nest	Last sighting
1	1955	1957
2	1961	1965
3	1961	1962

Pair 1 may have nested in a hollow beech nearby in 1956. A single bird used the site of pair 2 as a roost in 1962. Although a bird could still be seen in this locality in 1965 the site was no longer used as a roost.

Status of other raptors

Since 1954 there appears to have been little change in the status of the three non-breeding raptors which occur in the studied area. These are the Peregrine, Merlin and Short-eared Owl. Among breeding species, the Kestrel has remained unchanged at 1 to 2 pairs, the Buzzard has increased from 0 to 1 breeding pairs, the Sparrowhawk has declined from 4 or 5 breeding pairs to 1, the Tawny Owl has probably remained unchanged at 6 or more breeding pairs and the Long-eared Owl declined from at least 6 breeding pairs in 1954 to 1 or none in 1963 and risen again to at least 3 pairs in 1965.

The breeding density of all hawks and owls was therefore about one pair per 105 acres in 1954 and one pair per 155 acres in 1965.

Human activities in relation to Barn Owls

The data presented in this section are not quantitative, some events important to Barn Owls may have been overlooked, and some of the statements made are open to dispute. The human activities examined are disturbance or destruction at nests, farming or forestry programmes affecting hunting ranges, and the local use of chlorinated hydrocarbon chemicals.

Since 1954 there has been no destruction of adult owls. There was no disturbance or destruction at the nest of pair 3. But in 1955 there were structural alterations to the stable above which pair 1 nested, including renovation of the loft. Pair 2 were often watched at the nest with no apparent ill-effects, but in 1955 one of the three owlets was removed, and in 1961 both the owlets were taken.

Farming and forestry programmes did not affect the range of pair 1 but one of the small glens hunted by pair 2 was planted with conifers. What effect this had on its suitability for hunting is not known. By 1962 the rushes in four fields often hunted by pair 3 had been eradicated. Although forestry work nearby appeared to create a little additional range, it seemed that their most favoured hunting ground was considerably reduced.

By enquiry it was found that there was no use of chlorinated hydrocarbons in forestry, and their horticultural use was very severely restricted. It was not possible to obtain figures for their use in farming but it appeared to be lower than is usual in the surrounding area and in any case, since this is a dairy farming region, the amount of crop grown is small and the use of these substances is less than it is on arable farmland.

About 500 Pheasant eggs are collected annually for rearing from birds caught up and penned on the estate, and it was thought that serious local contamination of the habitat would be detected by a drop in the hatchability of these eggs, increasing over the years. This has not occurred and the proportion of eggs hatched varies between 85% and 93%.

Food spectrum of pair 2

In September 1964 a large mass of pellet debris was collected from the floor of the loft where pair 2 had nested and roosted. Checks made on the spot indicated that this material was reasonably typical of all that present. Most of the material was presumably over two years old but had been well preserved in the weathertight loft.

The material was examined and all bony fragments collected. The number of individuals of each species or family represented was then worked out, using all reasonable precautions against error. 568 identified items are listed as percentages in table 2. Since no correction figures for part-consumption only of some prey species are available for the Barn Owl, the figures represent the number of individuals of each species taken and not the more accurate total weight of each species consumed.

Table 2. Food spectrum of Barn Owl pair 2

	Percentage by number of items in sample
Common shrew *Sorex araneus*	33.4
Short-tailed vole *Microtus agrestis*	31.9
Wood mouse *Apodemus sylvaticus*	18.3
House mouse *Mus musculus*	3.9
Bank vole *Clethrionomys glareolus*	3.1
Water shrew *Noemys fodiens*	2.4
Pygmy shrew *Sorex minutus*	1.7
Brown rat *Rattus norvegicus*	0.3
Water vole *Arvicola amphibius*	0.2
Mole *Talpa europaea*	0.2
Sparrow, probably all *Passer domesticus*	3.8
Thrush/Starling *Turdus* sp./*Sturnus vulgaris*—juv.	0.2
Small bird	0.2
Unidentified beetle	0.4
Total—568 items	100.0

Discussion

Until 1954 three pairs of Barn Owls bred on the estate, but by 1962 none did so. From observation and enquiry it appeared that the Barn Owl was commoner over much of southern Ayrshire than it was in the study area, and that it had greatly declined in numbers in this, presumably more favourable, region in recent years.

There are two possible explanations. The first is that the Barn Owl notoriously fluctuates in numbers in northern temperate countries such as Scotland (Voous 1960; Baxter & Rintoul 1928), being presumably sensitive to quite mild pressures at the edge of its range. The second is that a marked decline, possibly attributable to the use of chlorinated hydrocarbon chemicals on the land, has recently occurred in most British breeding raptors, including the Barn Owl (Woodford *et al.* 1963).

Although another raptor which has declined nationally, the Sparrowhawk, became rare as a breeding bird in the area during this period, the Long-eared Owl had a marked drop in numbers followed by a considerable recovery. The changes in status of these raptors could therefore be considered to be due to two different causes and so shed no light on the local decline of the Barn Owl.

Information on local use of toxic chemicals is inadequate to indicate anything, but the continued high hatching rate of Pheasant eggs might suggest only a modest degree of local contamination.

The food spectrum of pair 2 does not show that these birds preyed heavily on a likely source of contamination; shrews and small rodents seldom carry heavy concentrations of chlorinated hydrocarbons in areas of low use (N. Moore, pers. comm.) and the 3.8% of sparrows in the diet would seem to be an insignificant source. No drop in the breeding success or numbers of sparrows in this locality has been obvious.

The data here presented are therefore inadequate to explain the cause of the local decline, which in any case might be a combination of the two possible explanations suggested; but they seem to raise a point, important to conservation practice, on the mechanics of the decline.

It is at least a striking coincidence that all three pairs ceased to breed following single adverse happenings within their territories. These were considerable disturbance of the site (pair 1), the taking of all the young (pair 2) and reduction of the favoured hunting range (pair 3).

Since this owl was also decreasing in an adjacent region where it was commoner, the abandonment of the territories discussed might be a withdrawal from marginal range as part

of a more general decline. The actual checks which precipitated it might otherwise have been only temporary but appear to have had an exaggerated effect on a marginal part of a shrinking population.

Summary

1. The decline of three pairs of Barn Owls in a 2000 acre area of north Ayrshire was investigated between 1954 and 1965; all bred regularly up to 1955 but none bred after 1961.

2. The nest sites and hunting ranges are described.

3. The status of other raptors is examined and a decrease in the Sparrowhawk and fluctuations in the Long-eared Owl breeding populations are noted.

4. Human activities in relation to Barn Owls are noted as disturbance or destruction, farming or forestry work physically affecting ranges, and the local use of chlorinated hydrocarbon chemicals.

5. The diet of one pair is examined.

6. The data are discussed and it is suggested that the cause or causes of the decline cannot be shown but that the species was decreasing in an adjacent, more favourable, region and therefore quite minor man-induced checks were sufficient to precipitate withdrawal from this marginal ground. This point is relevant to conservation practice.

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Short Notes

Great and Cory's Shearwaters at Fair Isle and on east coast

Sea-watching at Fair Isle is generally dull and unproductive, but this was certainly not the case in September 1965, when we witnessed the largest and most varied migration of shearwaters recorded at Fair Isle.

Cory's Shearwater had never been recorded from Fair Isle or the surrounding sea area and there were only four previous records for Scotland. Single Great Shearwaters had been seen at Fair Isle by L. S. V. Venables on 14th and 21st September and 8th October 1936. The crew of the *Good Shepherd,* plying between Fair Isle and Shetland once or twice a week, had never noted these large shearwaters during their crossings.

When I meet visitors to Fair Isle I am always interested to learn of the birds they have seen during the crossing from Shetland. Ron Kettle and Keith Noble arrived on 17th Sep-

tember and reported at least 30 Great Shearwaters. The birds were in groups of four or five, the first about five miles from Shetland and the last about three miles from the island. Several times the birds came within ten yards of the *Good Shepherd,* and other large shearwaters were seen at a greater distance but not specifically identified.

Nicholas Dymond and I sea-watched from the Niz (the most northerly point of Fair Isle) between 0645 and 0730 hrs GMT on 18th September and we saw three large shearwaters fly west and one east. We had reasonable views of these birds and noted that the upperparts were uniform brown with no pale areas on the rump or nape and the underparts were pale. There was no great contrast between the brown and white areas, so we concluded that they were Cory's Shearwaters. This was confirmed later in the morning.

We returned to the sea-watch position at 0835 with most of the birdwatchers staying at the observatory, and at 0900 four Cory's Shearwaters flew west. From then until 1015 hrs 55 more Cory's Shearwaters flew west past the Niz in groups of 2, 1, 8, 26, 4, 11 and 3; and three singles flew east. We noted no more shearwaters before we left at 1100 hrs. A short watch in the afternoon produced one Sooty Shearwater but none of the larger species.

The following day one Cory's and three Sooty Shearwaters flew west between 0625 and 0715; later, between 0905 and 1130, six Cory's and six Sooty Shearwaters were noted. At 1050 three large shearwaters flew east, and these were considered to be Great Shearwaters; this was confirmed by observations on 20th September. The upperparts of these three birds were brown, with the primaries, tail and crown darker, and there was a distinct capped appearance. The underparts were very white and there was a sharp contrast as the birds careened from side to side in flight. Further watches on the 19th until 1230 and from 1555 to 1620 only produced two Manx Shearwaters.

On the 20th, 21 Great Shearwaters flew east and seven flew west past the Niz between 0900 and 1130; one Cory's flew east, nine large shearwaters (too distant to identify) flew west and seven flew east during the same period. At the south tip of Fair Isle 12 Cory's, one Great and four large shearwaters flew east between 1025 and 1230. During subsequent watches on 21st, 22nd, 23rd and 24th September we recorded mainly Great Shearwaters, with smaller numbers of Sooty and Manx Shearwaters and two Cory's.

The following table itemises the shearwater watches made during this period of September 1965.

Shearwaters at Fair Isle in September 1965

Date	Period of watch (GMT)	Wind	Great	Cory's	'large'	Sooty
18th	0645-0730	NE3-4		3W, 1E		
	0835-1100	NE3-5		59W, 3E		
	1115-1130 (S)	NE3-5				1W
	1330-1530	NE3-5				1W
19th	0625-0715	N1-2		1W		3W
	0905-1230	NW1	3E	6E	3E	1W, 5E
	1555-1620	NW1				
20th	0900-1130	SW3	7W, 21E	1E	9W, 7E	4W, 7E
	1025-1230 (S)	SW3	1E	12E	4E	1E
	1310-1430	SW3	3E			1W
	1415-1500 (S)	SW3			1E	
21st	0615-0900	S4	5W, 3E		3W, 14E	3W
	1530-1630	NW5				
22nd	0910-1135	W3	38W		4W, 1E	
	1035-1115 (S)	W3				
	1430-1530	W3				
	1525-1535 (S)	W3	1W, 2E		1E	
23rd	0620-0705	SW1		2W		
	0850-1115	SW2	9W, 4E		5W, 5E	5W
	1510-1525 (S)	S3				1E
24th	0615-0715	NW2-3	1W		2W	
	0915-1015	NW2-3				
			61W, 37E	65W,23E	23W,36E	19W,14E

(S) indicates watch made at south tip. W indicates bird flying east to west, and E vice versa.

A special trip on the *Good Shepherd* to determine the distribution of shearwaters in the sea area north of Fair Isle and to photograph them had to be cancelled because of rough seas. On 21st September however Bill Porteous went on the return trip of the *Good Shepherd* between Fair Isle and Sumburgh Head. The boat was delayed by a gale and he returned the following morning. The crossing is about 24 miles and takes an average of three hours. The outward journey began at 0615 and the return to Fair Isle at 0900.

Numbers of Great Shearwaters seen from the 'Good Shepherd' on 21st and 22nd September 1965

	Miles out from Fair Isle towards Shetland		
	0-8	8-16	16-24
21st	5W	3W, 1E	2E
22nd	1S	2S	6W, 4S
	6	6	12

These observations show that Great Shearwaters were in evidence throughout the area between Fair Isle and Shetland

and as was to be expected there was a greater number off Sumburgh Head, because of passage round the southerly point of Shetland. Conditions for observation from the *Good Shepherd* are very poor and these numbers are a minimum. Watchers on the Niz observed about ten shearwaters (probably Great) circling the *Good Shepherd* 2-3 miles off Fair Isle on the 21st; only two or three were seen in this area from the boat.

Great Shearwaters were subsequently recorded from the *Good Shepherd* on 24th September (17 on outward and 8 on return trip), 28th September (8 on outward trip) and 5th October (6 on outward trip). No more were seen by the crew until 9th November, when there were two, and the last was one on 16th November. Descriptions of both species are given below.

Great Shearwater

About same size as Fulmar, although body looked smaller and wings slightly longer and narrower. Upperparts generally dark brown; cap blackish and clearly demarcated; tail darker, and wings had a three-colour effect, noticeable at great distance, up to about 2 miles (wing coverts deep brown, primaries darker, and area in mid wing on trailing edge paler greyish brown); at close range from boat, buffish tips to wing coverts gave a scaly appearance; upper tail-coverts white, forming narrow V, visible up to 800 yards, but difficult to see at usual shearwater range of over one mile, although in favourable conditions this pale patch flashed in the sun at a mile or more; underparts very white, and underwing white with dark markings and lines running to tips; white on sides of neck nearly joined across nape, giving the dark head a capped appearance; black and white areas sharply demarcated; from boat a large brown smudge noted on flanks in front of wing, and smaller dark marks behind. One bird was noticed to have a large dark patch on the belly. From the shore we did not see this dark belly smudge until we learnt when to look for it—when the bird is turning away from the observer and down to sea. In such cases we always noted this smudge, even at distances of nearly a mile. The bill was dark.

The flight was heavier than Manx Shearwater and rather Fulmar-like. The wings were held straight but drooping from the body in a bowed manner. The flight was low over the water, veering slowly from side to side, with long glides interspersed with several flaps, slower and heavier than Manx Shearwater. As the birds turned from showing their upperparts a flash of white from the sides of the neck preceded the white of the underparts. This flashing contrast between the white and black areas was nearly as noticeable as in Manx Shearwater. Those observed feeding in the area had an irregular flight, changing direction frequently and rarely rising more than a few feet above the sea; while those flying past had a regular and more direct flight, rising only a small distance above the sea and flapping more often than the Cory's Shearwater. One bird was heard to give a single, short, soft call, not unlike a Herring Gull—but softer and more musical.

Cory's Shearwater

Larger than Fulmar, wingspan greater and body slimmer, more Gannet-like. Whole upperparts uniform dark brown, not as dark as Sooty Shear-

water; upper surface of wings appeared uniform and there was no white above tail or on nape; belly white, and rest of underparts and underwing whitish, centre of underwing whitish to tip; no demarcation between upperparts and underparts—the brown merged into white and there was no real flash as the bird turned from side to side; a drabber more uniform bird than the Great Shearwater.

When gliding the wings were slightly but noticeably swept back from the carpals, and held straight below the body in a shallow anhedral. The flight was regular and bounding; the birds rose high above the sea before making a long smooth return. These arcs of flight were much higher and longer than those of the Great Shearwater. The Cory's flapped their wings less often than Great Shearwaters and they did not careen from side to side so much.

All the shearwaters on 18th and 19th September were flying purposefully past Fair Isle, but on 20th, 22nd and 23rd September a few Great Shearwaters were foraging over the water within 300 yards of the Niz. They often circled rafts of Fulmars and several times settled at the outer edge of a raft. Two birds on the 23rd were slowly foraging past the point; at times they pattered across the surface of the water and then plunged in and swam under water with their wings for a second or two. We did not see them catch anything although we felt certain that they were feeding on some small fish or organism. There was a tremendous wreck of jellyfish and small floating organisms on the beaches at Fair Isle during this period.

Both Sooty and Manx Shearwaters were noted in greater numbers than usual, but this may have been partly due to the intensive spell of sea-watching in September. The yearly totals of Sooty Shearwaters seen at Fair Isle and on the crossing from 1957 to 1965 are 1, 4, 8, 0, 23, 12, 8, 32 and 56 respectively. It would appear that the Sooty Shearwater has become commoner in these waters in recent years, and the season of occurrence has been extended from August-September to August-November.

As well as those mentioned above, the following watched the shearwaters in this period: G. Barnes, G. Brown, M. Christersson, A. Vittery, J. Gregory, R. Lightfoot, R. Lorand, C. Millican, J. Davies and E. J. Wiseman. I am particularly grateful to Douglas Brown and Nicholas Dymond who gave me their full notes on these movements.

Roy H. Dennis.

I was lucky enough to be on board a trawling vessel, the F.R.S. *Scotia,* on 22nd September 1965. On a southeasterly course from Girdleness, North Kincardineshire, and between 8 and 11½ miles from this point, I saw not less than six Great Shearwaters. The boat passed alongside these birds about midday, and a few seen flying later may or may not have been the same individuals. The closest of the birds—between

15 and 20 ft away—was foraging by touching down on the water at intervals of a few feet and sometimes submerging completely for short periods. Full descriptions have been supplied to the editors.

H. E. M. Dott.

(These Great and Cory's Shearwaters were part of an unprecedented influx of thousands of each species to the western side of the British Isles noted from Fair Isle to the Scillies at this time. There are no previous records of the Great Shearwater for North Kincardine or Dee, and none of Cory's Shearwater for Fair Isle or the Northern Isles.

In connection with the regular occurrence of Sooty Shearwaters in Shetland waters in autumn we are publishing a most unusual photograph of one taken by Dennis Coutts from a fishing boat off Scalloway on 23rd August 1965. We are also including a remarkable shot of a milling mass of Fulmars taken on the same occasion.—Ed.)

Food of the Sparrowhawk on Speyside

Between March 1964 and April 1966, 89 food items taken by Sparrowhawks in nine separate ranges near Aviemore, Inverness-shire, were identified. Of these, 61 were collected at or near nests and 28 during the rest of the year, and there is therefore a bias towards food brought to the young, especially during the later stages of nesting. The 81 birds recorded were Chaffinch (27), Woodpigeon (9), Song Thrush, Blackbird, Redstart, Meadow Pipit (4 each), Blue Tit, Robin, Hedge Sparrow, Yellowhammer (2 each), Skylark, Jackdaw, Great Tit, Coal Tit, Wren, Fieldfare, Ring Ouzel, Wheatear, Willow Warbler, Waxwing, Siskin, Reed Bunting (1 each), and unidentified gamebird (1), thrushes (2) and small passerines (6); there were also two short-tailed voles, a common shrew, a rabbit and four unidentified beetles.

The list of items given in the *Handbook* does not mention common shrew, Ring Ouzel, Wren or Waxwing, though Brüll includes Wren (3) and Waxwing (1) in a list of 731 items from ten Sparrowhawk territory-years in Germany (*Proc. I.C.B.P. Working Conf. on Birds of Prey and Owls.* Caen, 1964: 24-41).

Differences between the list and studies made in lowland Britain, such as the absence of House Sparrows, indicate differences in the local bird populations. However, the absence of two local woodland passerines—Crested Tit and Crossbill—may be noted. Crested Tits were abundant in the

study area throughout the period; Scottish Crossbills were scarce, but immigrants were common on passage in July and August in both years and Sparrowhawks were seen hunting them.

DOUGLAS N. WEIR.

Goshawk in Midlothian

On 15th April 1966 we watched a Goshawk in Dens Cleuch at the east end of Threipmuir Reservoir for about three minutes before it flew off round Black Hill. It flew fast with long glides in straight flight, and when soaring it went quickly round in a small circle with tail fanned. The Red Grouse were flying about in great confusion.

At first we took it for a Buzzard but we soon realised that the silhouette of the wings was too short and the tail too long and narrow (though very broad when the bird was circling)—more like a large Sparrowhawk. It was much bigger than a nearby Carrion Crow. As it completed a circle and banked over in front of us at a height of about 150 ft we got a good view of the underparts. The breast was barred darker than the whitish belly. The underwing was dirty white (and could possibly have been barred) and there were no conspicuous carpal patches or dark tips. We did not see any marks on the tail as we were concentrating on the wings and breast. The wings were short and rounded and very broad, with fingered primaries. The head was small in silhouette and projected slightly in front of the wings. The upperparts seemed to be dark but we did not get a good view of them.

We are both absolutely sure that the bird was a Goshawk.

M. A. MACDONALD, R. L. SWANN.

Little Ringed Plovers in Scotland in autumn

Martin Coath, Stewart Crooks and I were standing near the Gully on Fair Isle on 4th September 1965 when at the same instant I saw and heard a small plover flying over the hillside and MC recognised the call of a Little Ringed Plover. SC and I confirmed the call and I persuaded the bird to return and land on the road beside us by imitating its call. It was a young bird in good plumage. After moving to a wet shingly area it flew off and disappeared over the hill. I refound it on the gravel airstrip and we mistnetted it there in the evening. It was taken to the observatory, where it was weighed, measured, ringed and released. The following description was noted:

Upperparts drab brown with feathers tipped and fringed sandy buff;

forehead buffish white; dark mark from lores through eye; white feathering round eye, and yellow orbital ring; dark brown band below white nuchal collar; underparts white with dark brown pectoral band, narrower and buffer in centre of breast; primaries dark brown with dark shafts, except for white shaft to second; rest of wing brown, with thin white tips to secondaries, greater and lesser coverts; underwing white; tail mainly brown, banded subterminally black, and tipped white, but outer pair of feathers mainly white; small bill black with orange-flesh base to lower mandible; legs and feet yellowish, tinged green at joints, and claws black; iris dark brown; weight 29.2 gm (1st-winter Ringed Plovers usually weigh 40 to 60 gm); wing 115 mm; tail 59 mm; bill 13 mm; tarsus 24 mm; primaries, secondaries, greater and primary coverts fresh, the rest of the plumage old, and tertials and scapulars very worn.

The bird was last seen on 7th September, and by this time it had been seen by many people, including G. Barnes, P. J. B. Slater and E. J. Wiseman.

ROY H. DENNIS.

On 17th September 1965 I was watching birds at a salt-water pool near Brough, Whalsay, Shetland, and noted six Ringed Plovers. It was not until the birds flew on my close approach that I was aware that one of them was making a different call from the soft *tloo-it* of the Ringed Plover, with which I was well acquainted. The call was a higher pitched *pew pew* or *tew tew*. After flushing the birds several times, hearing this call, and noting that one bird lacked the white wing-bar of the Ringed Plover, I was convinced that it was a Little Ringed Plover.

By this time the light was fading and I left the pool, to return unsuccessfully several times next day. However on 19th September the birds were back at the pool, and in bright conditions with 12x50 binoculars I watched the bird both in flight and at rest at distances of from 20 to 30 yards. It closely resembled a Ringed Plover except that it was a little smaller and slimmer and the back and wings were a little paler and more mousey coloured, and there was no white wing-bar. The leg colour could not be seen as the bird always rested among loose seaweed and mud, but the blackish bill and yellow ring round the eye were noted. I was left in no doubt that the bird was a Little Ringed Plover.

JOHN H. SIMPSON.

On 12th October 1965 at Aberlady Bay, East Lothian, with A. Leitch, D. W. R. Macdonald and P. C. Williams we saw what we identified as a Little Ringed Plover. We took notes on the spot. It was very like a Ringed Plover, brown above and white below, with a similar pattern of black breast-band, white collar, black eyestripe and dark crown, but in adverse lighting we could not see a white line above the forehead nor the leg colour. It had no wing-bar at all, and

its call was a high piping disyllabic *teu teu* quite unlike a Ringed Plover's call, with which we are all familiar.

We flushed it three times and also watched it on the ground. We all thought it was smaller than a Ringed Plover but we could not compare size as it kept on its own all the time. There was no doubt in our minds that it was a Little Ringed Plover.

M. MACDONALD, R. L. SWANN.

(These three records, which probably all refer to young birds, are the first reliable reports for Fair Isle, Shetland other than Fair Isle, and Forth. The species now breeds in the north of England, yet there have been no Scottish records for well over 50 years (and then only two) apart from a slightly puzzling report of three adults in Skye on 3rd June 1949 (*Brit. Birds* 43: 131).—ED.)

Kentish Plover in Fife

At 8 p.m. on 21st April 1966 with 8x40 binoculars we watched a Kentish Plover in Elie Bay for about five minutes at distances of from 10 to 25 yards. The evening sun was behind us as it fed at low tide near rocks on the sandy shore.

The bird was particularly tame. It resembled a Ringed Plover but we immediately noticed that it was slightly smaller and less sturdy, being a slighter bird with a different head pattern and a much greyer brown back. We did not hear it call, but examined it carefully and noted the following points before it flew off behind us and disappeared into the sun:

Crown and nape same grey-brown as back, with no black stripe on forehead separating crown from white above bill; black eyestripe bordered white above and white below; no pectoral band, but smudge on either side of upper breast; underparts white; light wing-bar visible in flight; centre of tail and rump slightly darker than back, and sides of tail white (more than just outer feathers); bill black and less sturdy than Ringed Plover's; legs black.

EDWARD HUTCHISON, J. J. C. HARDEY.

(The only previous Scottish records are of single birds at Fair Isle on 14th May 1949 (*Scot. Nat.* 1950: 24) and in Aberdeenshire on 3rd and 4th May 1962 (*Scot. Birds* 2: 246).—ED.)

Dowitcher in Shetland

On 20th October 1965 I found a bird feeding at the edge of a small brackish loch immediately behind the beach at Symbister, Whalsay. With 12x50 binoculars I watched it at

ranges down to 30 yards both in flight and at rest and was in no doubt that it was a Dowitcher.

It alternated between the loch and the open seashore when flushed, and fed along the shoreline and among seaweed with a quick stabbing motion of the long bill. It was about the same size as a Snipe and its flight was similar but a little more direct. The neck seemed to be drawn in to the body and the bill (about the length of a Snipe's) was carried at a downward angle. The legs were not seen to extend beyond the tail in flight, and no call was heard. When it settled it dropped very suddenly.

The head, neck, upper back and wings were greyish brown and the underparts whitish. A prominent white rump extended well up the back. The bill was brownish but the colour of the legs was not seen clearly.

On 7th November it was feeding on the shoreline but flew away when flushed and was not found again. This is the second record for Shetland, one having been seen on Unst on 23rd and 24th May 1964 (*Scot. Birds* 3: 254).

JOHN H. SIMPSON.

Great Snipe on Fair Isle

At 1730 hrs GMT on 1st May 1965 we were walking across marshy ground between Kennaby and Quoy at the south end of Fair Isle. From one of the small ditches we flushed a Great Snipe which flew off a short distance and landed in another ditch. We saw it in flight three more times before it disappeared behind a hill. It probably landed in a marsh there, but we could not find it again.

The flight was not erratic like a Snipe and it did not fly far before landing—like a Jack Snipe. When flying a longer distance it resembled a small Woodcock, flying in a heavier and slower manner than a Snipe, low to the ground and with the bill pointing obviously downwards. It did not call.

The plumage was generally similar to Snipe but the upperparts were darker, with the pale stripes appearing narrower, like a Jack Snipe. When it landed we noted that the wing coverts were pale, forming a greyish patch on the wings. The underparts were white, but the flanks and sides of the body were heavily barred dark brown, much darker and more noticeable than on a Snipe. The tail appeared slightly longer and there was some white on the outer feathers but this was not so noticeable as we expected. Bill and legs were similar to a Snipe's, although the bill appeared relatively shorter.

On 27th September 1965 EJW flushed another Great Snipe

from the same marshes. As it rose the bird gave two low soft grunting notes. The flight, size and plumage were similar to the spring bird, and these points were confirmed when the bird was flushed for a second time from a patch of potatoes at Busta. Finally it flew off low over the hill and was not seen again.

These are the fourth and fifth records for Fair Isle since 1948, the other three all being in autumn. There are two old spring records—5th and 15th May.

R. H. Dennis, E. J. Wiseman.

Probable breeding of Wood Sandpiper in Perthshire

On 11th June 1966, when visiting a hill loch in the North Perthshire division of Tay, I observed a small wader which I identified as a Wood Sandpiper. It was first seen in flight, when the white rump and the legs projecting beyond the tail were most noticeable. When next seen it was in song flight over the loch. The song, although somewhat obscured by the calls of gulls, was noted as a series of short notes on the same pitch. The bird was later located on a patch of peaty mud near the shore where it allowed approach to within 20 yards. It had to be actively flushed to permit examination of the tail pattern, when it rose silently and pitched again a short distance away.

A second visit was made during the first week of July and on this occasion two birds were seen. Both behaved in an agitated manner, one bird 'chipping' almost continuously and making short flights overhead while my companions and I were in one particular area of heather and peat hags. The second bird made only two brief appearances during which it too chipped anxiously. About an hour was spent searching for the chicks which I supposed to be in the vicinity but we were unable to find them in the very broken terrain.

The Wood Sandpiper has not been recorded previously in North Perthshire.

Valerie M. Thom.

(In addition to the sites in Sutherland (*Scot. Birds* 3: 196, 425 etc.) there is at least one other locality in Scotland where this species is almost certainly breeding.—Ed.)

A big flock of Little Stints

At 4.30 p.m. on 21st August 1965 I was watching Dunlin on the beach at Dornoch, Sutherland, when another flock of birds came ashore from the northeast. I was surprised to be

allowed to walk right into the middle of the flock as the birds ran busily past on either side feeding round my feet and cheeping like a flock of domestic chickens. Though I waved and shouted they took no notice.

The average of three counts was 230, and every bird was a Little Stint. The birds were compared with the Dunlin a little way away and detailed notes were made. After about five minutes they rose unhurriedly in wisps of 10 or 15 and streamed across the Dornoch Firth in the direction of Morrich Moor.

JAMES D. OLIVER.

(This exceptionally large flock, apparently newly arrived, may be compared with one of over 100 birds at Findhorn Bay from 18th September 1960 (1: 333). More Little Stints than usual were recorded in autumn 1965, a few of them just after this big flock was noted in Sutherland (3: 426).—ED.)

Temminck's and Little Stints in East Lothian in spring

On 15th May 1966 my wife and I were walking along the edge of the saltings at Aberlady Bay Nature Reserve when we came on a stint-sized wader which appeared to be about half the size of nearby Ringed Plovers. Our attention was first attracted by a sort of twittering chatter—almost a song—as it sprang away from us and beat erratically around over the grass. It returned to the edge of the saltings and, although very nervous and erect at first, settled to feed very rapidly about 25 yards away, where we were able to watch it with the sun behind us. There were many people all over the reserves and the area where we saw the bird was perhaps the quietest part that was not just sand.

We flushed the bird three or four times and each time its note was the same almost song-like chatter with no single notes in it. In the air it was difficult to follow but it showed a wing-bar similar to a Dunlin's and clear areas of white on each side of the rump and tail coverts, though we could not see for certain whether the white extended to the outer tail feathers. The flanks and belly were pure white. Although the back showed brown in flight, on the ground the bird's general colour was slate-grey, with slate-grey wing coverts and a sort of dappled slate-grey over face and breast; there was a faint eyestripe. The bill was short and the legs seemed rather short too. They were not black but a brownish yellow, not easy to define against the ground.

On these points—especially the voice and leg colour—I identified the bird as a Temminck's Stint.

J. A. D. HOPE.

(By an awkward coincidence a Little Stint was seen in the same general area on 21st May by R. W. J. Smith. However, the fact that it was not the same bird is confirmed by its feeding below high water mark with Ringed Plovers and Dunlin (instead of more or less on its own at the edge of the saltings), by its silence, and by its plumage. It had a muddy brown mantle, mottled buff and black, evidently breeding plumage; prominent V on back; Dunlin-type tail pattern; brown head suffused pink, with russet on sides of neck and breast; light colour on throat, extending to breast and belly, but narrowing on neck; and apparently black legs. It was watched for half an hour but in the flock it could not be approached nearer than 100 yards. The observers studied each other's notes and are convinced that they did not see each other's bird.

This is the first record of a Temminck's Stint in East Lothian in spring though there are three autumn records (*Scot. Nat.* 1949: 126; 1954: 44; *Scot. Birds* 4: 88).

We have been asked why the last of these birds got so much more space in a recent issue than one shot at Islesteps (*Scot. Birds* 4: 111)—a first record for Solway and the latest autumn record for Scotland by a full seven weeks. Partly this arose from the chance that space was short when the Solway bird was reported, the East Lothian record being already set in type, but equally there is more that can be said about a live bird than a dead one and a bigger problem in establishing its identity. The Solway bird has been examined by C. E. Palmar, Curator of Natural History of Glasgow's Art Galleries and Museum at Kelvingrove, where the skin now is, and by two of the editors. It should be added that Islesteps, although close to Dumfries, is in Kirkcudbrightshire.—Ed.)

Cream-coloured Courser in East Lothian

On 9th October 1965, Douglas Baty, and Ian and Tom Robertson, independently discovered a strange bird frequenting the dry sand and dunes above the highwater mark at Aberlady Bay, between the sand-spit and Gullane Point. Baty, who had a copy of the *Field Guide* with him, identified it as a Cream-coloured Courser. He telephoned the Scottish Centre from Aberlady village and asked for someone to come and confirm his identification. George and Irene Waterston immediately left Edinburgh by car, joined Baty at the Timber Bridge, and were taken to the area to find P. W. G. Gunn and others watching the courser. There was little difficulty in confirming the identification of this strikingly distinctive bird.

Apart from its head markings it was a uniform light fawn

colour, darker above and paler below, paling to white towards the vent. There was a black stripe running back from the dark eye and a white stripe above it, both curving down to meet at the nape in clear-cut Vs; the crown was sandy at the front and grey at the back, shading to black in the point of the V. It was a plump bird (*Field Guide* says 'slim'), with long dirty-white legs. In size it appeared to be between Dunlin and Knot. In gait it resembled a Golden Plover—often taking short rapid runs and stopping abruptly to adopt a very erect posture (more upright than in the *Field Guide* plate). The bill was dark and rather short, with a downward curve to a somewhat sharp point. The tail was short with a narrow black band at the tip. Unlike plates in the *Handbook* and the *Field Guide* the black edges to the primaries were completely obscured by the buff covert feathers when the bird was on the ground ; they were only seen when it bent forward to pick at the sand.

The whole appearance and colour of the bird seemed to change when it took flight, with black flashing from the underwings and the top-side primary feathers. It would flick suddenly to the ground, close its long pointed wings, and stand bolt upright. A. D. K. Ramsay noted that when a Redshank flew swiftly overhead it crouched in a cowering position, and it was then that one could appreciate the wonderful camouflage and its protective value from predators.

R. S. Baillie noted a feature unrecorded by anyone else. When the bird was in flight and the wings fully extended, he recorded "a white or nearly white stripe, approximately ¾" broad, running across the full width of the wings from the carpal joint backwards between the secondaries and primaries. The stripe was not obvious to the naked eye, but through a powerful binocular at a range of approximately 12 yards the stripe was most conspicuous."

M. J. Everett heard it call once when flushed, completing the call before being properly airborne—"a quiet liquid *kwoo-ee,* rising on the second syllable." On another occasion A. K. J. B. Glasier heard "a soft melodious *too-li,* somewhat similar to a Ringed Plover."

As the bird showed little fear of observers and allowed them to approach to within three to ten yards, and as it was frequenting a nature reserve, it was decided to announce its presence and location in the columns of the *Scotsman* on 13th October, so as to give as many birdwatchers as possible an opportunity of seeing this rare species (see Editorial 3: 385). Hundreds of people made the journey to Aberlady, not only from different parts of Scotland but from as far away as the south of England. Many excellent views of it were obtained; and although some photographers were inclined

to harry it unnecessarily, it paid little attention to people and would continue to feed.

It kept mostly to the dry dunes, a habitat similar in many ways to its native deserts of North Africa and southern Asia, On one occasion however it was seen on the shore at the west end of Gullane Bay. It was last recorded at Aberlady on 21st October, having spent nearly a fortnight in the area.

DOUGLAS BATY, GEORGE WATERSTON.

(The only recognised Scottish record of the Cream-coloured Courser is of one shot near Lanark on 8th October 1868. A brief report of three seen in the same county on 10th October 1949 (*Glasgow Bird Bulletin* 2: 31), which the Scottish Bird Records Committee declined to accept without further corroboration (*Scot. Nat.* 1955: 102), is being looked at again.—ED.)

Lesser Grey Shrikes in Orkney and Shetland

On 11th November 1962 I observed a Lesser Grey Shrike at Stennady, Finstown. When I first saw the bird it was perched on the TV aerial on the chimney. Susequently it flew from place to place and perched on various trees in the garden. For a time it was on the topmost twig of a small tree about 15 feet high as I watched within 20 yards with 7x binoculars. Here I had a good opportunity of checking its size against a Robin which had occupied the same perch only seconds before. I got the impression of rather small size—body no bigger than a Corn Bunting's.

The head, including forehead, crown and nape, and the mantle were dull medium grey, slightly brownish; rather a broad blackish-brown patch through the eye, from the bill to and including the ear coverts, with practically no blackish feathers on the forehead above the bill; wings blackish-brown with a single conspicuous white bar seen at rest, and noted in flight as extending across the bases of the primaries only: tail same colour as wings, but outer feathers appeared mainly white and there were white tips to the others; underparts a soiled creamy colour; bill blackish; legs and feet dark; iris dark brown.

I am quite familiar with the Great Grey Shrike, having watched migrants on many occasions. This was definitely a smaller bird with a different wing pattern; and evidently a first-winter bird. There had been a spell of east to south-easterly weather and there was a considerable fall of other migrants, including Fieldfares, Redwings, Blackbirds and Goldcrests.

This seems to be the first record for Orkney, though details have recently been published of another, found dead in a

water barrel on North Ronaldsay in May 1965 (*Scot. Birds* 3: 420).

E. Balfour.

On 23rd September 1965 I was given a message that a grey shrike had been seen in the Sellafirth district of Yell. I went there and found the bird working along a fence close to the road, and I was able to watch it from the car at distances from 25 to 75 yards. The light was good, there was a light breeze, and I was using 10x43 binoculars.

The bird was behaving in typical shrike manner, perching for a time on the fence wires, and periodically flying, sometimes gliding, to the ground to pick up an insect. It rarely came back to the same place but usually moved on a few yards.

In May 1965 I had watched a Great Grey Shrike which staved in the east Yell area for over a week. It preferred the higher telegraph wires as a vantage point. Other differences were that the present bird looked smaller, sat in a more hunched attitude, did not appear to have such a long tail, and the first time it turned to face me I saw that it had a different head pattern, the black of the lores and ear coverts extending over the forehead and rather merging into the grey of the crown.

The wing and tail pattern were also clearly seen as the bird glided to the ground, and the single large white patch on the blackish wing and the white outer feathers on the dark tail were very obvious. Perhaps the bird was tired, for the wings were held rather drooped and the feathers, particularly round the head, were a bit fluffed up when the bird relaxed. I was left in no doubt that it was a Lesser Grey Shrike—either a female or a 1st-winter male.

Description. Blackish patch through eye, lores and ear coverts meeting over forehead which, seen closely, appeared mottled and rather merged with crown; crown, nape, back and scapulars blue-grey with brownish tinge on scapulars (but no pale edging apparent on scapulars); underparts creamy white, lighter on throat, neck, and possibly belly; wings dark brownish black with conspicuous white patch at base of primaries and narrow buff-brown edgings to secondaries and secondary coverts, the edging being wider and paler (but not white) on tips of secondaries; tail blackish with white outer feathers, the rounded tip showing less white than Great Grey Shrike; bill bluish black, almost horn at base; legs and feet blackish.

The bird was seen in the area until at least 30th September. There have been a number of records of Lesser Grey Shrikes on Fair Isle but the only other Shetland record is of one shot on Whalsay on 14th September 1929.

Robert J. Tulloch.

Woodchat Shrike in Shetland

On 3rd October 1965 at Gremista, Lerwick, I saw a bird which at first glance looked like a very pale female Red-backed Shrike (I have handled this species at Fair Isle) but with white at the base of the primaries. From my car I was able to watch it in sunlight with 10x50 binoculars from as close as 20 feet.

It sat on fence posts by a cornfield and continually watched the road for flies. On a post, or on the wire, it twitched its tail from side to side, flew down to the ground for a brief second and flew back to the fence, always working along it without returning to the same place. I watched and followed in the car very carefully for about 45 minutes and was successful in taking a number of photographs using an 800 mm lens. From a picture of the bird on the fence and another showing the wing pattern in flight R. H. Dennis identified the bird as an immature Woodchat Shrike.

It was a pale sand colour all over, palest on breast, very slightly darker on back, and primaries and tail a little darker still; these latter feathers all with paler warmer edging; most noticeable feature a near white wing flash at base of primaries; shoulder patch not very obviously pale though showing on photograph; bill blackish, creamy at base of upper mandible; eyes and legs very dark.

I saw the bird again in the same place two days later for a further 30 minutes.

DENNIS COUTTS.

Current Notes

Compiled by P. J. B. SLATER

(Key to initials of observers : D. R. Anderson, D. G. Andrew, R. St. J. Andrew, R. H. Appleby, R. S. Baillie, W. Bain, I. V. Balfour-Paul, J. Ballantyne (JBt), Miss P. G. Baxter, Dr J. Berry (JBy), H. Boase, T. Boyd, A. W. Brodie, R. Brown, J. Bruce (JBc), R. J. Buxton, A. Campbell (ACl), R. Campbell, R. N. Campbell, M. Carins, P. Clark (PCk), Sir C. G. Connell, Mrs P. Coull (PCl), D. Coutts, A. Cowieson (ACn), H. G. Cree, G. M. Crighton, Miss M. H. E. Cuninghame, W. A. J. Cunningham, T. Delaney, R. H. Dennis, G. Dick, R. C. Dickson, H. E. M. Dott, Hon H. Douglas-Home, J. Dunbar, Mrs J. P. D. Dunlop, J. M. Dunn, J. N. Dymond, W. M. M. Eddie, J. Edelsten, N. Elkins, M. J. Everett, Miss W. U. Flower, H. A. Ford, M. Forrester, R. W. Forrester, Mrs M. Gear, I. Gibson, K. Goodchild, Mrs S. Goold, J. Goss-Custard, Mrs J. A. R. Grant, T. Grieve, J. S. Groome, Mrs E. Hamilton (EHm), J. J. C. Hardey, J. A. D. Hope, R. B. Hughes, D. C. Hulme, E. N. Hunter, E. Hutchison (EHt), P. F. James, R. A. Jeffrey, R. Job, D. Joy, Miss E. M. Kerr, Miss H. Knight, D. Law (DLw), D. Lea (DLa), A. L. A. Leslie, J. A. Love, I. H. J. Lyster, A. Macdonald (AMcD), D. Macdonald, M. A. Macdonald, Mrs M. K. Macduff-Duncan, I. M. MacLean, J. Macleod,

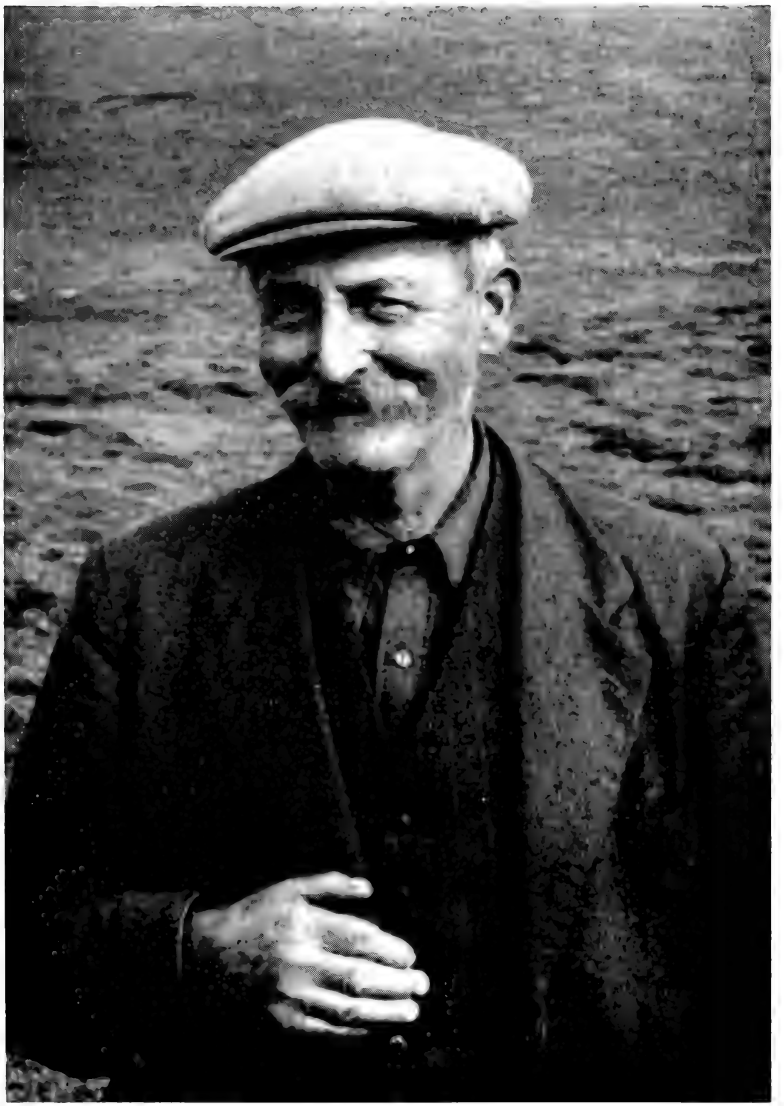


PLATE 25. George Stout of Field (see p. 255).

Photograph by Angela Davis

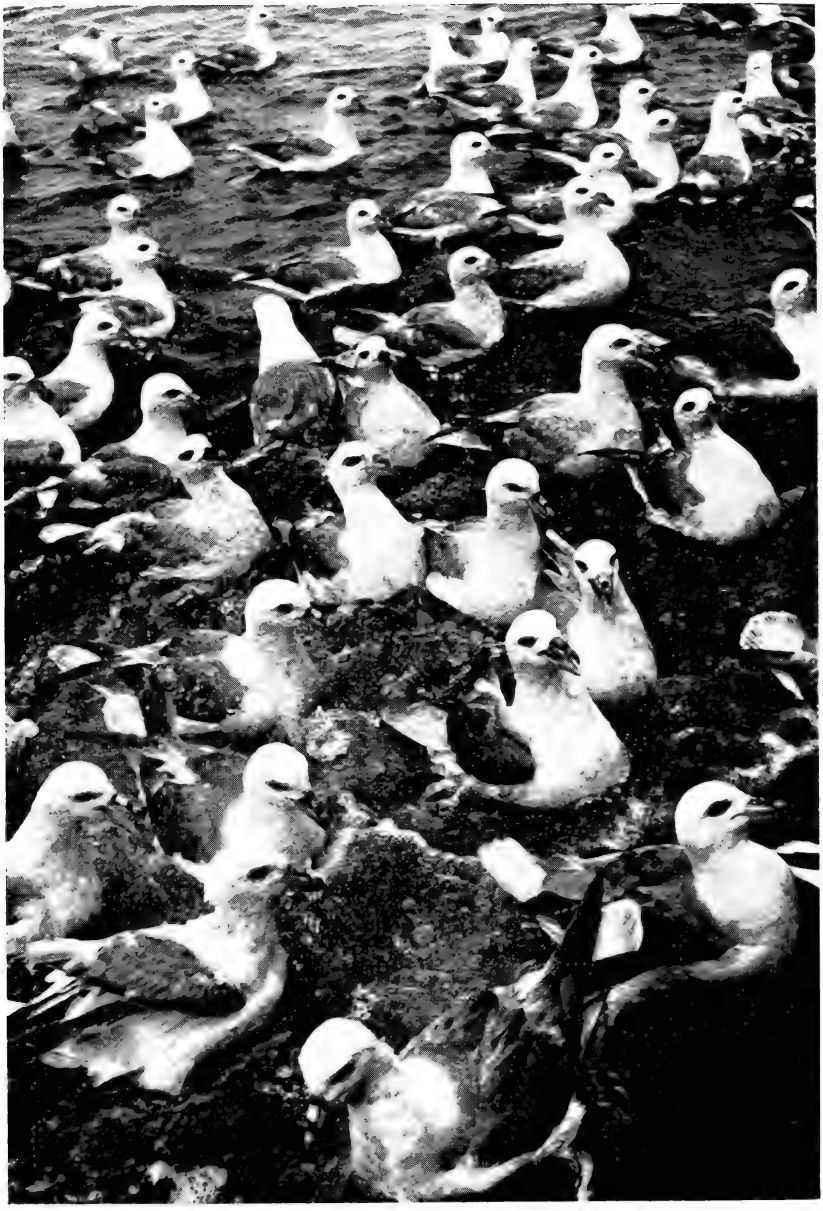


PLATE 26. Part of a milling mass of some 500 Fulmars jostling round a fishing boat at the Burra Haaf fishing grounds on the west coast of Shetland on 23rd August 1965.

Photograph by Dennis Coutts

PLATE 27. Sooty Shearwater photographed from a fishing boat at the Burra Haaf, six miles off the west coat of Shetland, on 23rd August 1965. Numbers of these birds had been seen all summer in the area and they are regular in autumn in Shetland waters (see p. 223).

Photograph by Dennis Coutts

A. T. Macmillan, Mrs E. H. L. Macmillan, G. McMurdo, A. Malcolm (AMm), M. B. Malcolm, J. R. Mather, W. Matheson (WMn), Prof. M. F. M. Meiklejohn, J. K. R. Melrose, E. Mercer, Lady A. Morrison-Low, C. M. Morrison, N. Morrison, W. M. Morrison, W. Moss (WMs), K. R. Munro, C. C. I. Murdoch, J. B. Murray, W. Murray (WMy), D. J. Norden, W. Ogilvy, D. W. Oliver, J. S. Oliver, C. E. Palmar, T. Paterson, G. L. A. Patrick, Prof. R. W. Pickford, N. Picozzi, R. K. Pollock, W. Porteous, J. Potter, A. D. K. Ramsay, C. P. Rawcliffe, G. A. Richards, Dr M. Rusk, W. Russell, P. W. Sandeman, J. H. Simpson, M. Sinclair, A. J. Smith, Mrs E. M. Smith, R. T. Smith, R. W. J. Smith, Dr T. C. Smout, R. Spencer, D. Stalker, J. K. Stanford, D. M. Stark, A. I. Stewart, R. W. Summers, J. Swan, R. L. Swann, C. Tait, I. Taylor, J. W. Taylor, Miss V. M. Thom, R. B. Tozer, R. J. Tulloch, Mrs P. V. Upton, L. A. Urquhart, K. Walker, F. D. E. Walls, G. Waterston, A. D. Watson, J. Watt, Hon. D. N. Weir, T. Weir, G. T. White, W. H. Wild, D. E. Williams, Miss H. A. Wright, W. Wyper, J. G. Young, B. Zonfrillo.

Unless otherwise stated, January to July dates refer to 1966 and all others to 1965.)

Because there was not any room in the last number for Current Notes, the period covered here is about twice as long as usual. In order to keep the article to a both writable and readable length it has therefore been necessary to select items for inclusion more rigorously than normal. One way in which contributors can help to lighten the task of abstracting useful points from their notes is by listing the species they have seen in the Wetmore order, as used here, and it would be helpful if those who are not in the habit of doing so would bear this in mind. Almost everyone now sends their notes in time to reach the editor before the end of each quarter. As may be imagined, this is a great help. Notes from over 150 observers are given in detail in Current Notes in this issue.

Distribution

This section is restricted to observations made since 1st November 1965—older records are given later except where relevant to more recent topics.

Black-throated Divers have previously been noted wintering in Loch Torridon, Wester Ross (3: 367), but 17 seen there on 10th January is a large count (ENH). An exceptional event on the Water of Leith at Currie, Midlothian, from 3rd to 8th January was the occurrence of a **Great Northern Diver** which was diving in the river and apparently uninjured (DEW). Inland reports of single **Red-throated Divers** are of a badly oiled bird found dead at Duns, Berwickshire, on 4th February (ACn); one seen at the Endrick Mouth, Stirling/Dunbartonshire, on 23rd January and subsequently found dead (ACl, JMD); and one which had been dead for about a month, found at Gladhouse, Midlothian, on 15th May (DGA).

The return of **Great Crested Grebes** to the Moorfoot lochs

took place suddenly about 13th March when four were at Gladhouse and one at Portmore, Peeblesshire (DGA). The picture at Morton Lochs, Fife, is the same, with singles on 30th January and 26th February, but seven on 19th March. As last year (3: 367), three pairs bred (RJ).

Although there are many records of **Red-necked Grebes** on the south side of the Forth, one seen at Elie, Fife, on 21st April is the only one reported elsewhere (JJCH, EHt). Notable for their unusual choice of habitat are single **Slavonian Grebes** seen on the River Tyne at Tyninghame, East Lothian, on 9th January (CT), and in Leith Docks on 10th (CPR). Four **Black-necked Grebes** on Loch Ryan at Stranraer, Wigtownshire, on 11th March is a high count: there had been one there with four Slavonians on 26th January (GAR). Two Black-necked Grebes in summer plumage were at Gullane Point, East Lothian, on 26th March (MAM, RLS); inland records of this species are of one at Loch Spiggie, Shetland, on 20th March (DC, DJ); and another, the first recorded in Roxburghshire, at Horselaw Loch, Yetholm, on 19th and 20th March (RSB). The presence of two **Little Grebes** at Morton Lochs on 13th February and one on 26th indicates an early return to this breeding site (RJ).

A **Leach's Petrel** found dead at Newcastleton, Roxburghshire, on about 4th March was nearly 20 miles from the sea (TG per IHJL). A **Storm Petrel** was seen in a strong SE wind at Elie Ness, Fife, on 5th April (RBH); and four were recorded in flat calm conditions between Ayr and Arran on 17th June (GAR). **Fulmars** seen away from the sea have been singles at Fairmilehead, Edinburgh, on 24th April and 6th June (HAF); one flying over Clairinch, Loch Lomond, in Stirlingshire on 5th June (CEP); and at Inverness on 3rd May one 2 miles from the sea in very direct flight NE over the outskirts of the town (as if from the Great Glen), one next day at the same place heading SW, and one a few minutes later heading NE (WMM).

Seabirds and fishing boats congregated in large numbers in the Moray Firth during the early part of the year to share the spoils of a particularly rich herring and sprat fishery. Apart from thousands of gulls, peak counts of **Gannets** were of 600 in Banff Bay on 24th January (JE); 700 off Inverness on 26th February (RHD); the remarkable total of at least 1600 off Longman Bay, Inverness, on 26th March, and still 500 there on 10th April (WMM).

Two breeding colonies of **Herons** have been found which do not appear to have been reported previously (see *Bird Study* 5: 90). Nine birds were present at Brucefield estate, Fife, in early April and two nests were found (RC); and there were at least six pairs at a heronry at Loch Meurach, Harris,

on 2nd April. This colony has apparently been in existence for at least five years (per NE).

A **Flamingo**, present at Tyninghame for about three weeks from 9th May, was an immature of the Chilean race as it had grey legs and pink 'knees'; it is therefore safe to assume that it was an escape (RB, MJE, AMcD).

A drake **Garganey** was seen flying in to Paisley Moss, Renfrewshire, on the evening of 11th May (IG). There are various records of **Gadwall**:

Balranald Marsh, N. Uist—4 pairs on 7 Jan (DLa, GW).
Moray Firth, at Inverness—1 on 12 Feb (RHD).
Edzell, Angus—2 on 25 Jan (RWP).
Kennetpans, Clackmannan—2 on 13 Feb (TP).
Eden estuary, Fife—2 on 27 Mar and 29 May (CT).
Morton Lochs, Fife—2 on 19 Mar; male on 15 and 29 May (JD, RJ).
Cupar, Fife—1 pair on 29 May (JD).
Duddingston, Edinburgh—1 pair on 18 Apr (DRA).
St Margaret's Loch, Edinburgh—male on 12 Feb (CT).
Aberlady, E. Lothian—1 on 22 Jan, 5 Feb, 12 Feb and 14 Apr (JSO, ADKR, CT).
Moorfoot reservoirs—1 between 17 Oct and 13 Feb (DGA).

The most noteworthy reports of **Pintail** are from the isles: in Shetland there was one on Fetlar on 17th January and 13th April (WO) and eight birds at Yell on 27th April (RJT). Two males were seen at Stornoway, Lewis, on 24th May (WAJC, WMn).

High counts of **Scaup** are of 2500 in St Andrews Bay, Fife, on 8th January (TCS), and 250 at Invergordon, Easter Ross, on 15th (RHD). Inland, 43 at Duddingston on 21st November is an exceptional number—their presence was no doubt due to strong easterly winds prevalent at the time (DGA). In Inverness-shire three males and a female were on Loch Garten from 2nd to 4th May (MJE, GW), and there was a male at Loch Ruthven on 25th (MJE, CCIM). June records are of a pair at Gullane Point, East Lothian, on 19th (WMME), and a male at Loch Kinnardochy, Perthshire, for at least a fortnight from 12th (VMT).

Duck which winter inland are particularly susceptible to cold weather and their numbers are liable to fluctuate erratically. On 5th December, when Loch Leven was icebound, there were 300 **Tufted Duck** and 400 **Pochard**, as well as 500 **Mallard**, on the sea off Leven, Fife (DGA, RStJA). Numbers of **Pochard** at Duddingston stood at 2700 on 21st November—an early date for so large a count. By 8th January they had fallen to under 400 although there was no ice at the time, but by 8th February there were 4000 on the loch (DGA). At Kilconquhar Loch, Fife, the situation seems to have been the reverse, with a peak of 2100, about twice the normal, on 16th January (DWO).

Winter peaks of **Goldeneye** were of about 950 at Invergordon on 15th January; about 450 at Inverness on 11th January (RHD); and 650 which came in to roost at Kilconquhar on 31st March (DWO). A bird answering the description of the aberrant Goldeneye described previously (3: 409) was seen at Monikie reservoir, Angus, on 16th April in the company of four normal Goldeneye with which it was identical in every respect except plumage (CMM). Single Goldeneye lingering into the summer were at Skinflats, East Stirlingshire, on 19th June (IT), and Cramond, West Lothian, on 28th May and 3rd July (TCS).

Two **Long-tailed Ducks** were seen off Ayr on 22nd December (GAR). Inland occurrences have been of one at Gladhouse on 14th November (DGA); one at Gartmorn Dam, Clackmannanshire, on 12th and 13th March (TP); a pair on Lindores Loch, Fife, from 5th to 30th March (JW); and a male which stayed on Kilconquhar Loch from 9th February to 12th May (DWO). A late female was at Fair Isle, Shetland, between 11th and 27th June (RHD).

A summer record of **Velvet Scoter** is of three off the east shore at Tentsmuir, Fife, on 25th June (RJ). There were about 6000 **Common Scoters** in St Andrews Bay on 8th January (TCS), and in Stirlingshire, a pair was seen flying past Inchcailliach, Loch Lomond, on 21st May (CEP). Two **Eiders**, the first for five years in the observer's experience, were seen off Cramond Island on 24th April. On 3rd July a female with four small young was seen nearby at Dalmeny, West Lothian (TCS).

Small numbers of **Goosanders** are seen throughout Scotland outside the breeding season, but the largest wintering concentration is on the Beauly Firth, where a maximum of 560 was recorded on 28th December (RHD).

The following are reports of wintering **Smew**, many of which tie up with those given previously (4: 107) (all except the Shetland bird were red-heads):

Clickimin, Shetland—ad ♂ from 9 Mar to about 10 Apr (DC, RHD, WP, RJT).
Strathbeg, Aberdeen—1 on 13 Mar (JE).
Stormont Loch, Perth—1 on 16 Apr (VMT).
Endrick Mouth—1 on 16 Jan (RWF).
Tullibody, Clackmannan—1 on 6 Mar (TP).
Barr and Castle Semple Lochs, Renfrew—at least 4 on 13 Feb (JND, WHW); 1 on 6 and 29 Mar (RAJ).
Loch Libo, Renfrew—1 on 6 Jan (GAR).
Rowbank Reservoir, Renfrew—3 on 23 Jan (RWF); 1 on 20-21 Mar and 1 Apr (HGC, MJE, RAJ).
Roseberry Reservoir, Midlothian—3 on various dates between 12 Dec and 13 Mar (DGA).
Horselaw Loch, Roxburgh—1 on 19-20 Mar (RSB).

There are also two summer records of this species: a male seen in Loch Eriboll on 11th June is the first record of a Smew in Sutherland (RJB), and a very late red-head was at Kilconquhar on 25th June (DWO).

Eleven **White-fronted Geese**, suspected of being European, flew in to Gladhouse on 14th November (DGA). Counts of 55 on 9th January and 84 on 16th at the Moor of Genoch are large, even for the Greenland race, in Wigtownshire (RCD). Birds of undetermined race outside their normal wintering areas have been three at Loch Spiggie, Shetland, on 13th March (DC, RHD); 11 at Loch Heilen, Caithness, on 16th January (KG); one near Methven, Perthshire, on 31st January (VMT); and three flying over Tayfield, Fife, on 26th February (JBy). The largest flock of **Bean Geese** to be reported from the Castle Douglas area of Kirkcudbrightshire was of 70 birds seen on 20th February (JND). 102 **Pink-footed Geese** were at Loch Garten on 2nd May—a late date for such numbers (MJE).

A **Snow Goose**, which has previously been reported (4: 108), probably wintered in the area of Strathbeg, Aberdeenshire, being seen there on various dates up to 13th March and at Meikle Loch on 7th April (HEMD, JE). Six birds, two of which bore rings, were at Wester Wooden Loch, Roxburghshire, from 31st March to 4th April (HD-H, AJS). Single blue-phase **Lesser Snow Geese** have been seen at Morton, near Tayport, Fife, on 26th February (JBy), and with Pinkfeet near Methven, Perthshire, on 31st January and 4th February (VMT).

There are a number of reports of Pale-bellied **Brent Geese** in the Forth area during February and March. Largest counts were of 27 going south at Fife Ness on 13th February (PGB), and 20 at Tyninghame on 27th (TB, EMS, RWJS). Two of this race and one Dark-bellied bird stayed at Eyebroughty, East Lothian, from 13th March to 3rd April (RSB). The occurrences of 28 **Barnacle Geese** at Dounreay, Caithness, on 26th January (EM), and two at Loch Strathbeg on 14th April (HEMD), are the most unusual for this species.

Uncertainty with regard to the feral status of the **Canada Goose** in different areas makes it difficult to assess the records which are frequently sent in. There are, for instance, few reports for Wigtownshire but the species was introduced there in 1963 and has bred in the county each year since (JGY). A pair was discovered with a nest at Morton Lochs, Fife, on 23rd April (DWO).

Large concentrations of **Whooper Swans** during the winter were of 144 at Loch Spiggie, Shetland, on 31st October (MC); 391 at Invergordon on 15th January (RHD); and 267 near Tullibody on 12th December (TP). Two at Forfar Loch, Angus,

on 25th April were still there on 28th June (HB, GMC). Other late birds were two by Kinloch Rannoch at Dunalastair, Perthshire, on 13th May and one, which was probably injured, at Kingoodie in the same county between 2nd and 18th June (HB). The only report of **Bewick's Swan** is of an adult and an immature on Tiree on 18th April (JADH).

In Shetland, where **Buzzards** are rare, single birds were on Unst on 1st and 5th May (MS), and on Fair Isle on 14th and 15th April and on 24th May (RHD). Also noteworthy is one seen near Yetholm, Roxburghshire, on 12th May (RSB). A **Honey Buzzard** was at Fair Isle on 21st May (RHD). A **Marsh Harrier** seen briefly at Gartocharn, Dunbartonshire, on 9th June (TW), was doubtless the same bird as was seen flying over the Endrick Mouth on 12th June, and again on 3rd July (MF, DS). An immature was present at Tyninghame on 10th May (MJE, IHJL). There being few published records of **Hen Harriers** in Kincardineshire, it is worth noting that a brown bird was seen in the Glenbervie area several times in early January (WB).

Most readers will already be aware of the misfortune which befell the two pairs of **Ospreys** breeding on Speyside this year. A storm-force wind on 28th April blew down both nests: the one at Loch Garten had contained three eggs, and the remains of at least one egg were found at the other site (DNW). The following are reports of Ospreys seen outside Speyside:

Yell—1 on 7 Jun (RJT).
Whalsay, Shetland—1 on 8 Apr (JHS).
Fair Isle—1 on 25-26 Apr; 1 on 28 May (RHD).
River Earn, Perth—1 near Forteviot on 16 Apr (VMT); 1 at Dalreoch, near Dunning, on 29 May (PCk).
Kilconquhar—1 on 25 Jun (DWO).
Isle of May—1 going S on 14 May (DWO).
Eyebroughty—1 going W on 29 May (RSB).
Loch Ken, Kirkcudbright—1 on 1 May (LAU, ADW).

Notes continue to come in of the poor breeding success of birds of prey, but there is a glimmer of hope in the fact that **Peregrines** are doing better on Speyside (DNW). In Shetland, however, "after a promising early season, it is the same old story of a seeming loss of interest and departure from the eyries, with no hatching success" (RJT).

Quail heard calling have been one near Paisley Moss on 21st May (IG, RAJ); one near Gifford on 27th May (per AMcD); and one on Fair Isle on 11th June (RHD). A **Spotted Crake** was found dead at Weisdale in Shetland on 9th April (RJT). The only April record of **Corncrake** is of one at Fair Isle on 10th (RHD).

Nine **Oystercatchers** by the River Isla at Coupar Angus,

Perthshire, on 30th January were inland on a very early date (VMT). A high count of **Grey Plover** for Aberlady is of about 80 seen there on 6th March (MJE, GLAP). An early **Dotterel** was seen on Tiree, Argyllshire, on 15th April (JADH), and two more migrating birds were at Machrihanish in the same county on 14th May (PGB). An odd record of a **Turnstone** is of one in summer plumage at Barr Loch on 14th May (LAU).

Highest numbers of **Whimbrel** on passage were on 8th May when there were at least 16 at Tyninghame (HAF), and 21 at the Endrick Mouth (RWF).

Black-tailed Godwits have been seen at the following places:

Fair Isle—1 in summer plumage on 25 May (RHD).
Dornoch Point, Sutherland—4 on 28 Apr (DM).
Montrose Basin—9 on 5 May; 1 on 20 May (GMC).
Near Errol, Perth—2 on flooded grassland on 11 Apr (VMT).
Eden Estuary—7 on 23 Apr (DWO).
Seafield, Midlothian—2 on 22 Jan and 5 Mar (CT).
Eaglesham, Renfrew—1 in summer plumage on 25 Apr (LAU).
Luce Bay, Wigtown—10 on 1 May (GM, JGY).

Apart from several seen at Fair Isle between 7th May and 9th June (RHD), single **Green Sandpipers** at Summerston, Glasgow, on 14th April (WR), and Lentran, Beauly Firth, on 3rd June (JAL, WMM), are the only ones reported. Passage of **Wood Sandpipers** at Fair Isle took place between 23rd May and 18th June (RHD). Further south, one was calling over a marsh near Kilconquhar on 28th April (DWO); single birds were at Paisley Moss, Renfrewshire, on 12th May and 19th June (IG, RAJ), and on the Dunbartonshire side of the Endrick Mouth on 28th May (DS).

The earliest report of **Common Sandpiper** is of four at the Endrick Mouth on 12th April (WR). There are a number of records in the south during the following week, but the first birds at Fair Isle and in Lewis were not until 2nd May (RHD, JM).

Single **Spotted Redshanks** were at Montrose Basin on 16th January (JD); Paisley Moss on 30th April (IG); and Luce Bay on 1st May (GM, JGY). Two were seen at Dornoch Point on 24th April (DM), and late birds in summer plumage were singles at Loch Dornal, Wigtownshire (RTS, JS, JGY), and at Fair Isle (RHD), on 19th June.

An odd date for a **Greenshank** so far north is 24th December, when one was seen at Fort William, Inverness-shire (RHD). At least two were back at Gairloch, Wester Ross, on 30th March (ENH). A late migrant was at the Endrick Mouth on 11th June (HGC, DLw).

Single **Ruff** seen have been one at Tyninghame on 27th March (TB, RWJS), and a male at Elie, Fife, on 4th January

(DWO). There were seven coming into summer plumage at Paisley Moss on 30th April (IG, RAJ); 11, including several sparring males, at Aberlady on 4th March (MFMM); and nine at Skinflats on 12th and 19th March (GD, JP, IT). Also at Skinflats a male was present between 7th and 10th May (IT).

Two **Avocets** were seen on the bank of a freshwater loch in Whalsay on 16th May (JHS). **Phalaropes** in winter plumage are tantalisingly difficult to identify with certainty: one such was at Gullane Point, East Lothian, on 2nd and 3rd April (IVB-P, JSO).

Winter **Great Skuas** are unusual: one was off Whalsay on 13th January (per JHS); one was seen flying north at Fife Ness on 20th February (PGB); another was with gulls on the Moor of Genoch, Wigtownshire, on 26th February (RCD); and a fourth record is of one found dead at Turnberry, Ayrshire, on 15th March (GAR). Two **Long-tailed Skuas** were seen near Whalsay on 25th May (JBc).

Ten **Lesser Black-backed Gulls** at Barassie, Ayrshire, on 21st February is a good number even for an area where this species winters (GAR). Two were at Tweedsmuir, Peeblesshire, on 4th February (MJE, GW); one at Paisley Moss on 28th February (IG); and the first to return to Shetland was seen on Fetlar on 15th March (RJT). A pair of **Herring Gulls** seen at a nest on a mud island in Loch Broom at Ballinluig on 7th June are apparently the first recorded breeding in North Perthshire since 1884 (VMT).

A first-winter **Glaucous Gull** was seen at Tentsmuir on 13th March (RJ), and an immature was at Paisley Moss on 8th April (IG). Also at Paisley Moss was an adult **Iceland Gull** on 2nd March and an immature between 9th and 14th April (IG). Other reports are of singles at Inverness on 16th January (RHD), 13th March and 10th April (WMM); Stannergate, Dundee, on 10th April (JKRM); and Gairloch, Wester Ross, on 21st May (WAJC).

The largest flock of **Little Gulls** in the Tay area was of 47 off Kingoodie on 20th April—there were still six there on 30th June (HB). Outside this normal wintering locality an adult was at Gladhouse on 10th April (RWJS).

A **Black Tern** at Aberlady on 22nd May (RWF), was followed by no less than eight at Threipmuir, Midlothian, on 29th, though these had all gone next day (TD). A **Common Tern** at Fife Ness on 16th April (DWO) was the first reported, although a Common/Arctic bird had been seen at Aberlady on 14th (MAM, RLS). Three incubating **Arctic Terns** were located in a colony of Common Terns near Caputh on the River Tay, Perthshire, on 26th May (VMT). The earliest re-

port of a **Little Tern** is of one at Ardwell, Wigtownshire, on 23rd April (RCD). **Sandwich Terns** were well up to time, the earliest being two at Prestwick, Ayrshire (GAR), one at Largo Bay, Fife (DWO), and seven at Dornoch, Sutherland (DM), all on 2nd April.

There are a number of reports of **Little Auks** outside the northern isles where they are often seen in winter—except where mentioned all were found dead:

Bower quarry, Caithness—1 caught on 19 Jan, died 2 days later (DMS).
Rosemarkie, E. Ross—1 on 11 Feb (per MR).
Nairn—1 oiled and dying on 23 Dec (per MJE).
St Andrews—3 oiled on 25 Feb (PGB); 1 on 5 Mar (JARG).
Fife Ness—1 seen in flight on 13 Feb (PGB); 1 found on 24 Mar (JARG).
Crail, Fife—2 on 5 Mar (JARG); 1 on 22 Mar (PGB).
Elie Ness—1 on 26 Feb; 1 on 18 Mar (DWO).
Largo Bay, Fife—1 on 9 Feb (PGB); 1 dying on 21 Mar (DWO).
Aberlady—1 on 5 Mar (per MJE).
Dirleton, East Lothian—1 on 16 Jan (RSB).
Tyninghame—1 on 30 Jan (TB).

A bridled **Guillemot** was at Cramond on 16th January—an odd date for a species which winters at sea (AWB, WMs). The discovery of a pair of **Black Guillemots** at Garroch Head, Bute, on 29th May raises hopes that they may be found nesting on the island soon (WW, BZ). At Inchkeith, Fife, where ten **Puffins** were seen and one egg found in summer 1965, there were some 40 birds offshore and on the rocks in June this year. Eleven were also seen off Fidra, East Lothian, in June—a single empty nest hole is the first indication of breeding on this island (EMS, RWJS).

Turtle Doves have again nested near Longniddry, East Lothian, where a nest containing one egg was found seven feet up in an elder on 9th June. They also nested at this site, the same as that at which they were first found in 1958 (1: 120), in both 1964 and 1965, one hatching in the latter year (NM per JBM).

The arrival of **Cuckoos** seems to have been on the late side, the first seen being one at Ladybank, Fife, on 22nd April (DWO), and one at Duddingston on 25th (DRA). One had reached Lewis by 30th (IMM). A female of the scarce rufous phase was seen near Sorn, Ayrshire, on 6th May (GAR).

There was a **Barn Owl** by the Peffer Burn at Aberlady on 20th April (DS).

Reeling **Nightjars** are reported at Southfield Hospital, Edinburgh, on 1st May (MAM); the south end of Glen App, Ayrshire, on 1st and 2nd June (GAR); and at Muir of Ord, Easter Ross, from 6th to 22nd June (DCH).

In contrast to most other migrants, **Swifts** arrived early

this year and there are many reports for the last few days of April. The first seen were singles at Ayr on 23rd (GAR); Forfar Loch, Angus, on 25th (HB); Edinburgh on 26th (PWS); and Girvan, Ayrshire, on 27th (RBT).

Three **Hoopoes** were seen in May: one at Sumburgh, Shetland, from 2nd to 4th (MC); one at Moss Side, Strachan, Kincardineshire, on 18th (NP); and one at Kilmaron Castle, Cupar, Fife, on 10th (AM-L).

Single **Green Woodpeckers** have been seen in Perthshire, on the fringe of their range, at Glenlochay, near Killin, on 7th and 8th April (RWS); and at Bonskeid, near Pitlochry, on 19th March (see also 3: 322) (RNC). An adult which had been dead for about two months, was found near Ballater, Aberdeenshire, on 15th June (AIS); and one heard at Brucefield on the Fife/Clackmannanshire border, on 27th March, provides further evidence of the spread of this species (RC). They almost certainly bred in East Stirlingshire last year, as a pair with a nest-hole was found near Falkirk in late May, but no young or eggs were seen. The discovery of a dead bird in a nearby garden in late March, may explain why no nest was found this year, although at least one bird was in the area on 29th May (IT).

The sudden appearance of heavy snow early on 19th February seems to have triggered off a very large movement of **Skylarks**. At Morningside, Edinburgh, 1000 were estimated to have passed during the course of the day, accompanied by 3000 Starlings. These are certainly understimates as only a very narrow front could be observed (DGA). At Powfoot, Dumfriesshire, on the same day an estimated 15,000 moved past in an easterly direction during the morning. A male **Shore Lark** was seen at the same place and at least three more were heard amongst the flocks of larks as they moved overhead (RHA, JRM).

An exceptionally early **Swallow** was at Unst on 4th March (MS), but no others were seen until 7th April. On this date one was at Langbank, Renfrewshire (RAJ, GTW), and two were at Musselburgh, Midlothian (JSO). Although there are one or two records for the following ten days, the first birds in the north were much later: on 21st at Muir of Ord (DCH), on 23rd at Fair Isle (RHD), and on 25th on Lewis (IMM); and it was also at this time that the main arrivals seem to have taken place further south. Swallows bred in Stornoway this year and a nest containing young was located on 22nd June in the same place as they apparently bred last year, though the observer was not shown the nest till after the breeding season (IMM).

The first **House Martin** was seen in Edinburgh on 19th April (ADKR), and there was one in St Andrews on 21st (MHEC),

with several records from the south on the weekend 23rd-24th. A March **Sand Martin** record is of one at Roslin, Midlothian, on 31st (ADKR). In April, there were two at Wemyss Bay, Ayrshire, on 3rd (ALAL); one at Endrick Mouth on 4th (RKP); and one at Dumfries (JKRM) and seven at Loch Arthur, Kirkcudbrightshire, on 6th (PGB). The first at Fair Isle was not until 23rd April (RHD).

A flash of yellow is often as much as one can hope to see of a **Golden Oriole** as the species is very secretive. A young male was heard calling and seen briefly in Camperdown Park, Dundee, on 5th June (CMM).

The **Magpie** is very local in Perthshire: one was at Balhaldie on 6th March and three were at Carsebreck on 20th (VMT). A pair was seen near Lochgilphead, Argyllshire, on 30th April and 1st May (TCS).

Tits are still being seen in Shetland—no doubt birds which remained behind after the small invasion there last September (3: 430). Two **Great Tits** were still at Norwick, Unst, during January and there were at least three on Fetlar and three on Yell in February and March (RJT). The discovery of an adult feeding three fledged young in Stornoway Woods on 27th June is the first record of this species breeding in Lewis (IMM). A pair of **Blue Tits** was at Leagarth, Fetlar, up to 2nd February (WO), and one also wintered on Whalsay (JHS). **Coal Tits** were suspected of breeding in Stornoway Woods last year (3: 374). They were again present this year and a party, including some young birds, was seen on 25th June (WMn).

Two **Marsh Tits** have been seen in East Lothian—an area for which there is only one previous record (*Scot. Nat.* 1957: 42). One was near Keith Bridge, Humbie, on 30th January (RS per GW), and the other was beside the Tyne, near Tyninghame, on 13th February (RWJS). At Yetholm, Roxburghshire, one was seen and heard on 31st December and again on 17th-19th January, near where the first for the county was seen in 1964 (3: 204). Further to this, however, an adult was seen feeding two newly fledged young in the same area on 20th June, and another adult was seen flying in and out of thick cover nearby. The birds were again watched on 26th and 27th June. Hitherto the only Scottish county in which this species was known to breed was Berwickshire (RSB).

A black-bellied **Dipper**, which wintered on Fair Isle, was last seen on 15th April (RHD). Others in Shetland were one at Scatness on 24th April (DJ), and one, possibly two, on Fetlar from 23rd to 25th (WO).

Ring Ouzels were very late in arriving, with only one

March record—a male at Loganlee, Midlothian, on 26th (HEMD). In April, a male was near Barr, Ayrshire, on 1st (RBT); on 3rd there was a pair at Loganlee (ADKR); and the first had arrived at Fair Isle by 7th (RHD).

There are many records of **Wheatears** during the first week of April, but few during March. The earliest male was at Flotterstone, Midlothian, on 19th (ADKR). On 26th a male was at Aberlady (MAM), and there were two males and a female near Yetholm (RSB). A male was at Barns Ness, East Lothian, on 30th (HAF). Single **Whinchats** at Fair Isle on 27th April (RHD), and Dunragit, Wigtownshire, on 29th (RCD), are the earliest reported. On 30th there was one at Paisley Moss (RAJ), a pair at Aberlady (JSO), and one at Stornoway (IMM).

The **Redstart** illustrates well what seems to be the case with most April arrivals this year: while the first birds were well up to time and even early, the main arrival was delayed till the end of the month. One on the Isle of May on 6th April (IT), and a male at Morton Lochs on 10th (CT), suggest an early year, but the next report is not until 23rd when two males were singing at Yetholm (RSB). The first on Speyside was not until 24th (DNW), and that at Fair Isle was on 27th (RHD).

Several **Black Redstarts** were seen on Fair Isle during May and June (RHD), and one was at North Ronaldsay, Orkney, on 14th May (KW). Elsewhere, females were seen at Balgay Hill, Dundee, on 22nd May (HB), and at Tyninghame on 5th June (CT), and a male was at Laurieston Place, Edinburgh, on 30th May (MAM).

It is worth listing the records of **Grasshopper Warblers** as this bird is local in its distribution—the three reported for 25th April were the earliest:

Near Dunragit, Wigtown—1 on 26 Apr (RCD).
Thornhill, Dumfries—1 on 25 Apr (JKRM).
Near Martnaham, Ayr—first on 28 Apr (GAR).
Yetholm, Roxburgh—1 seen and heard on 22 May (RSB).
Georgetown, Renfrew—1 on 7 May (IG).
Gifford, East Lothian—1 singing between 1 and 3 May (per AMcD).
Duddingston—1 heard on 1, 4 and 6 May (DRA, CGC, ATM).
Threipmuir—1 on 14 May (MAM, RLS).
Cramond Island, Midlothian—1, the first for the island, on 11 Jun (TCS).
Braid Hills, Edinburgh—1 singing on 12 and 28 May (HAF).
Milngavie, Dunbarton—1 on 1 May (WR).
Kilconquhar—1 on 25 and 26 Apr (PGB, DWO).
Loch Mahaick, S. Perth—2 heard in area on 2 Jun (TP).
Montreathmont Moor, Angus—1 on 3 May (GMC).
Fair Isle—first passing on 25 Apr (RHD).

The first **Sedge Warblers** were two at Morton Lochs on 23rd April (RJ). One was at Kilconquhar by 25th (DWO), and on

28th the first was seen at Loch Fergus, Ayrshire (GAR), and at Fair Isle (RHD).

A male **Blackcap** frequented gardens at Cumlodden Avenue, Edinburgh, during early March (HAW), and what was doubtless the same bird was seen, and ultimately caught, in a nearby garden in Murrayfield between 12th and 27th March (ATM, EHLM). Other wintering birds were a male at Jordanhill, Glasgow, for five weeks from 5th February (SG); a female near Maxwell Park, Glasgow, from 6th to 22nd January (JPDD, DJN); and another in Bonnyrigg, Midlothian, for a few days up to 13th February (PCI). It is interesting that wintering records of this bird are nearly always in town and often at bird tables, which Blackcaps would never visit in summer; no doubt the shortage of food is responsible. There are a great many reports of migrant Blackcaps this spring, and several observers have commented on how common they seem to be this year in the south of Scotland. The first seen were two at the Isle of May on 6th April (IT). A male at Tyninghame on 18th (TB, EMS, RWJS), and a female at Portencross, Ayrshire, on 19th (DS), were the next. On 24th there was a female at Kilconquhar (DWO); males were at Port William, Wigtownshire (RCD), and Thornhill, Dumfriesshire (JKRM), on 25th; and by 26th there were four in Saltoun Woods, East Lothian (AMcD). A male was seen and heard at Duddingston on 4th, 6th and 11th May—there are few records for the reserve (DRA, CGC, ATM).

The earliest **Garden Warblers** were one at Kilconquhar on 1st May (RBH); one near Annbank, Ayrshire, on 6th (GAR); and two at Roslin on 11th (ADKR). One was singing at Duddingston on 10th June (DRA). The first **Whitethroats** were singles at Dunragit on 26th April (RCD), and Fair Isle on 27th (RHD). The number of records during the ensuing week suggest a large arrival throughout the country at this time—there were, for instance, five at Summerston by 30th (WR).

Willow Warbler arrivals began with one at Port Logan, Wigtownshire (RCD), and one on the Isle of May (IT), both on 7th April. As with other migrants, there were only reports of odd birds thereafter until 23rd-25th April when the main influx occurred: 17 were at Yetholm on 23rd (RSB), and 10 at Arbroath on 24th (JD). The only March **Chiffchaffs** were two heard at Coodham Gardens, near Ayr, on 20th (FDEW per GAR), and one at Culzean Castle, Ayrshire, on 21st (RBT). The first at Dornoch was on 2nd April (DM), and small numbers were seen at Fair Isle from 4th onwards (RHD). These seem to have coincided with the main immigration further south as there were nine at Culzean on 4th

April (GAR) and 10 on the Isle of May on 6th (IT). In Wester Ross one was singing at Leckmelm, Lochbroom, on 17th June (DCH).

A **Wood Warbler** had reached Ballinluig, Perthshire, by 30th April (VMT), and there were at least two at Drumlanrig, Dumfriesshire, on 7th May (RBT). The first definite record of a nest in Sutherland since 1885 is of one containing six eggs at Spinningdale on 18th June (DM).

Single **Spotted Flycatchers** at Roslin on 7th May (ADKR), at Kilmarnock, Ayrshire, on 9th (GAR), and at Kilconquhar on 9th (DWO), were the first. Two were at Fair Isle on 18th (RHD), and one at Stornoway on 19th (IMM). A male **Pied Flycatcher** was seen in Glen Lyon, Perthshire, on 8th May (VMT), and a pair at Roslin on 11th (ADKR). Two nests and one singing male were located at Inversnaid this summer and this constitutes the first breeding record for West Stirlingshire (JSG).

Few observations of **Tree Pipits** have been sent in, but the first were on Tiree on 16th April (JADH), and Fair Isle on 26th (RHD). A female **Grey Wagtail** was at Lerwick, where this species is something of a rarity, between 28th February and 3rd March (DC). Single **Yellow Wagtails** of undetermined race were seen at Aberlady on 23rd April and 14th May (MAM, JSO). A fine male of the blue-headed race was at Gladhouse on 1st May (DGA).

There were unusually many **Great Grey Shrike** records:

Bressay, Shetland—1 dead on 2 Feb (per RJT).
Fair Isle—1-3 from 10 to 26 Apr (RHD).
Inverness—1 on island in River Ness, 23-31 Jan (WMM, MR).
Loch Mhor, Inverness—1 on 6 Apr (TW).
Tulloch Moor, Inverness—1 from 2 to 29 Apr (HAF, DNW).
Kincraig, Inverness—1 on 6 May (MJE, JKS).
Killin, Perth—1 on 3 Jan (VMT).
Comrie, Perth—1 for 1 week to 14 Apr (per VMT).
Balmakin, Fife—1 still in area during Mar (see 4: 115); probably same as seen on Colinsburgh/Cupar road on 25 Jan (DWO).
Fife Ness—1 on 29 Apr (PGB).
Kincardine, Fife—1 on 5 Mar (GD, JP).

A pair of **Hawfinches** was seen in Aboyne, Aberdeenshire, on 20th April (KRM), and two were at Roslin on 7th May (ADKR). In Shetland there were one or two in Lerwick during early April, and one in Yell and two in Unst on 27th (RJT).

Four male and three female **Crossbills** were seen in Troon on 6th March (per GAR). Scattered reports in Shetland from 16th June onwards are perhaps a portent of an invasion (RJT). On Fair Isle they were seen daily in fluctuating numbers from 12th June, with maxima of 37 on 24th and at least 30 on 30th (RHD). On Barra, Outer Hebrides, a female was

present on 18th June, a pair on 19th and three birds from 20th June to 1st July (AMm, MBM).

Last winter was obviously a good one for **Brambling** as many large flocks have been reported. The following are the most notable of these:

Fair Isle—peaks of 100 on 11 and 15 Apr (RHD).
Near Edzell, Angus—at least 500 on 17 Apr (GMC).
Near Brechin—at least 50 all winter (JD).
Near Arbroath—at least 200 all winter (JD).
Airlie Castle, Angus—50-60 on 24 Mar (VMT).
Tibbermore, Perth—over 100 on 31 Jan (PFJ).
Elie estate, Fife—150 on 13 Feb (DWO).
Largo Bay, Fife—100 on 10 Feb (DWO).
Portmore—over 250 on 29 Mar (HAF).
Newbattle woods, Midlothian—peak of about 50 on 18 Jan (EHm).

A late female was still at Arbroath on 15th May (JD).

Unusual birds in the northern isles are a **Yellowhammer** seen on Foula, Shetland, on 1st May (MG), and two male **Red-headed Buntings** at Fair Isle in late May (RHD). One of the latter was wearing a foreign cage-bird ring which has not yet been identified—but at least it can be said with certainty to have escaped from captivity.

A pair of **Reed Buntings** has already been mentioned as showing signs of nesting on Cramond Island last year (3: 377); three pairs bred there this year (TCS). A very unusual record is of a fine male **Lapland Bunting** on 30th April at about 1500 ft on the hills just above Balmaha, Stirlingshire (DS).

Six **Tree Sparrows** at Portsoy, Banffshire, on 25th March (JE), and one at Clunie Loch, Perthshire, on 29th June (VMT), were in areas where this species is not common. Hard as it may be to believe that the species has anywhere in the country left to colonise, the discovery of a pair of **House Sparrows** at Saxavord, Shetland, on 10th April is apparently only the second record there in the last five years (MS).

Earlier observations—before 1st November 1965

An exceptional raft of at least 181 **Eiders** was counted off the Dunbartonshire shore of Loch Long at Coulport on 5th October 1965. Other recent counts have been 60 on 19th July 1965 and a mere 11 on 17th January 1966. When the observer came to Coulport in 1954 there were no Eiders; the first were seen perhaps two years later, and numbers have increased gradually since. Breeding has not been proved, but two adults were swimming close to the shore with three half-grown young on 8th July 1965. There seems to be no previously published record of this species in Dunbartonshire (EMK).

Good views were had of an immature male **Hobby** at Mains

of Tarty farm, Aberdeenshire, on 17th September 1965 (JG-C, WMy).

The **Herring Gull** has not been recorded as breeding in Renfrewshire, but in 1964 there were several pairs on Loch Thom and one pair on Gryffe Reservoir nearby. Two chicks were located on the island in Loch Thom on 14th June that year, and there was one chick at Gryffe Reservoir on 27th (RAJ).

The scarcity of **Magpies** in the islands makes it worth noting that one was found dead in Port Ellen, Islay, in April 1965, and one was seen at Gruinart on the same island in June that year (HK).

General observations—behaviour, etc.

A female **Mallard** seen on the Water of Leith in Edinburgh on 6th June had somehow adopted a brood of six newly hatched Moorhen chicks. Although there was a pair of Moorhens in the vicinity they paid no attention as the Mallard escorted the chicks about on the water (RSB).

The observation of a **Golden Eagle** flying past at the same time and same place on two successive days, 11th and 12th June, near Loch Tay, Perthshire, made the observer wonder whether these birds follow a definite daily route during the breeding season (PWS). This would seem a likely occurrence as being the most efficient way of defending a territory and exploring it for food.

A stoat was seen to attack a **Buzzard** in the Black Isle, Easter Ross, on 17th May. The stoat followed the bird as it flew from one fence post to another, climbed the post it landed on and assaulted it, forcing it to fly up into a tree (MKM-D). The remains of a female **Sparrowhawk** were found at the nest of a **Peregrine** on Speyside on 28th April (DNW).

When a sitting **Oystercatcher** was approached at its nest on an island on Loch Druidibeg in South Uist on 12th May, the bird rose, ran to the far end of the island and swam some 30 yards into the loch. There it waited until the observer withdrew before returning and settling on its eggs. Although Oystercatchers are known to be capable of swimming well, this form of distraction display must be very unusual (RNC).

Two unusual nest sites are those of a **Common Sandpiper** on the sea shore just above the high tide mark near Balcary Point in Kirkcudbrightshire (WUF), and of a **Black-headed Gull** among some boulders in the middle of the River Almond at Almondell, West Lothian. The river was very low at the time and had the eggs not disappeared about 6th May they

would have been washed away with the next rainfall (JBt).

A curious **Sandwich Tern**, having a completely yellow bill, was seen amongst normal individuals at Gullane Point, East Lothian, on 1st May (RSB).

Hooded Crows were seen raiding **Sand Martins'** nests at a large colony near Fochabers, Morayshire, last summer. The crows were seen to hang on to the entrance holes and pull out nest material until they reached the eggs or young (per PVU).

A **Blackbird** which built its nest on a tenement windowsill in the High Street, Edinburgh, was no less than 45 feet from the ground (RSB).

On 10th August 1965 near Newton Stewart, Wigtownshire, a **Redstart** was seen making persistent attacks on a wood mouse. The bird was seen trying to peck at the mouse while flying over it for about three minutes until the mouse disappeared into the undergrowth (JGY).

A **Willow Warbler's** nest near Ballater became covered by about a foot of water when the River Dee rose on 23rd May. On 26th the bird returned to it and laid three eggs in addition to the two remaining in it from before the flood (JWT per AIS).

The limitation of numbers of breeding birds through lack of nest sites in otherwise suitable areas is a well known phenomenon. In 1963 six nest boxes were erected in a locality in Dumfriesshire where **Pied Flycatchers** were unknown. Five were occupied by this species in the first season, and all six in the two subsequent years. Although the birds were in the area this year none bred, as the boxes had been removed in the interim (JGY).

On the evening of 27th January, during thick fog, a large flock of **Starlings** crashed into the telephone wires strung across the main street of Yetholm. The birds had been heard circling the village and apparently lost, for about an hour beforehand. On 29th 62 bodies were counted on a 300-yard stretch of street and it is estimated that at least 100 birds were killed (RSB).

Finally, an anecdotal tale of **House Sparrows** celebrating the New Year prematurely in Yetholm. About 100 drunken birds were found roistering in some cherry trees on 30th December. They had apparently been feeding from a sack of partly fermented grain thrown out into his yard by a local farmer. The following day "a number of seedy-looking sparrows were observed wandering morosely about the garden and drinking copiously from the bird-bath!" (RSB).

Obituaries

GEORGE STOUT

(Plate 25)

Fair Isle's oldest inhabitant and best-known island ornithologist, George Stout of Field, known to everyone as 'Fieldy', died at Fair Isle on 5th April 1966 in his eightieth year. All who know Fair Isle will be saddened at the passing of this fine old man. His kenspeckle figure was a familiar sight trudging over the island roads in all weathers or searching the 'banks' for driftwood with always an eye open for a passing migrant. Fieldy was the last of the old-type collector-ornithologists; he pinned his faith in his .410 shotgun and never used binoculars. Even in old age his eyesight was remarkably keen.

It was in 1921 that Eagle Clarke paid his last visit to Fair Isle with a newcomer to the island, Surgeon Rear-Admiral J. H. Stenhouse. Fieldy's comment on the two elderly ornithologists bothying in the old cottage at Pund was "Man, they lived on bad food and good whusky for a month." It was entirely due to Stenhouse that Fieldy first became seriously interested in birds.

In 1923 Stenhouse began a succession of visits to Fair Isle. The first mention of George Stout of Field is in a paper by Stenhouse (*Scot. Nat.* 1927: 53) where he records that "after my departure, a female Short-toed Lark, *Calandrella b. brachydactyla,* was obtained by Mr George Stout on 19th October (1926)." From then on, Fieldy contributed regular notes to the *Annual Report on Scottish Ornithology*, edited by E. V. Baxter and L. J. Rintoul.

Stenhouse paid his last visit to Fair Isle in May 1928; and after his death I began to correspond with George Stout, whom I had not met. On 8th May 1931 he obtained the first British specimen of the Pallid Harrier *Circus macrourus.* It was sent to the Royal Scottish Museum and the occurrence published by Percy H. Grimshaw (*Scot. Nat.* 1932: 1). There is however an inside story to the account given by Grimshaw. When the skin arrived at the R.S.M., Grimshaw telephoned to tell me that my friend George Stout had sent in a bird labelled "Pale Harrier *Circus macrourus,* ♂ Fair Isle 8th May 1931." Grimshaw, an entomologist, thought that the bird was in fact a rather small male Hen Harrier and had written to Fieldy suggesting that it was a bit presumptuous of him to name the specimen "Pale Harrier," and was he aware that the species had never been recorded in Britain before. Back came a letter from Fieldy: "Don't judge other people by

your own ignorance. The bird is a Pale Harrier." Strong words from a crofter on Fair Isle to the Head of the Natural History Department of the Royal Scottish Museum! Grimshaw sent the specimen to the British Museum where N. B. Kinnear pronounced that George Stout's identification was correct. Grimshaw sent him a handsome apology.

It was not until September 1935 that I was able to visit the island with A. G. S. Bryson. Between 1928 and 1935 no outside ornithologists had landed on Fair Isle. It was obvious from the warmth of our welcome that Fieldy and Jerome Wilson had missed the live contacts with the outside world of ornithology. We worked the crops at the south end of the island every day accompanied by both islanders with their guns at the ready; they were expert shots. At the end of the day it was an education to watch them both skinning and preparing specimens, but a bit disconcerting to find that the skinning knife used by Fieldy (with arsenical soap as a preservative) was also used for cutting bread.

In 1936 when I again visited Fair Isle in company with Dennis Sandeman we stayed with Fieldy in his croft. He was a widower and lived alone. When we arrived he was gutting a lamb on the kitchen table. We ate our way stolidly through the animal for a week, at the end of which I for one could hardly look a sheep in the face. As a change from the everlasting boiled mutton I suggested sheep's head by way of variety. When we returned that evening, tired and hungry, Fieldy had a big iron pot bubbling and frothing on the open peat fire. "Well, what's it to be tonight Fieldy?" Fieldy, with a broad grin, replied "Man, it's the sheep's heid!" I lifted the lid off the cauldron to disclose a simmering froth of hairy scum. I understand there is some technique about singeing the head first—but how were we or Fieldy to know? The grinning skull was forked out of the pot and placed in the middle of the table and we all dug in. I think the only bit I could face up to was the beast's tongue.

Most people will remember Fieldy for his fund of stories —most of them highly imaginative. From the beginning of the War, Fieldy's imagination began to run riot and greatly to the sorrow of his old friends we came to treat his sightings of rarities with suspicion.

Those of us who were privileged to know him well will always remember his as one of Nature's real gentlemen. It was a joy to hear him talking in his strong Fair Isle dialect about "Bairred Wairblers," or clinching an identification argument with "it had to be wan o' thaim." Dear old Fieldy—how we shall miss you and your chuckling laugh.

GEORGE WATERSTON.

A. C. STEPHEN, D.Sc., F.R.S.E.

Dr A. C. Stephen, Keeper of the Department of Natural History at the Royal Scottish Museum from 1935 to 1958, died suddenly at his home in Edinburgh on 3rd June 1966 in his 73rd year.

Born at Garvock, Kincardineshire, he was educated at Robert Gordon's College and Marischal College, Aberdeen, which he entered in 1913. His academic course was interrupted by service in France and Belgium with the Special Brigade R.E. and he saw action on the Somme and at Ypres. He graduated B.Sc. with distinction in Zoology at Aberdeen in 1919. His first appointment was Junior Naturalist on the scientific staff of the Fisheries Board for Scotland in 1920 where he was responsible for an investigation into the distribution of animal life on the bottom of the North Sea; his report threw fresh light on the animal communities and their relation to fishery problems.

He joined the staff of the Royal Scottish Museum in Edinburgh in June 1925 as Assistant in the Department of Natural History, and his period of service was notable for the opening of new halls and galleries which, in their presentation of material, were well in advance of other museums in this country. His chief interest was marine zoology and he was a world authority on the taxonomy of echiurids, sipunculids and priapulids. He completed a synopsis of the British species and at the time of his death was engaged in the preparation of a monograph of the world species.

He came in closer touch with ornithologists as Editor of the *Scottish Naturalist* from 1935 to 1939. This journal was of course the principal outlet for notes on Scottish ornithology during the years up to the outbreak of war in 1939. The writer recalls with gratitude the encouragement and sympathetic interest shown by Alastair Stephen in the establishment of the Isle of May Bird Observatory and the Scottish Ornithologists' Club. Under his editorship the *Scottish Naturalist* was adopted as the official organ of the S.O.C. He took a keen and lively interest in the setting up of the Fair Isle Bird Observatory, of which he was a Trustee. He never missed an annual meeting of the Trust. He served as President of the Royal Physical Society and the Astronomical Society of Edinburgh.

He was a man of robust physique. His large, slightly stooping figure, carrying a small shopping bag, could be seen trudging along Princes Street in the lunch hour. He endeared himself to his friends by concealing a sensitive and kindly nature below a rough hearty exterior.

GEORGE WATERSTON.

WILFRID BACKHOUSE ALEXANDER

"28th September 1934: W. B. Alexander"—this is the opening entry in the Isle of May visitors' book, and at Christmas 1964 W.B.A. was able to write to his friends that he had fulfilled his dream of the coasts of Britain being encircled by a chain of bird observatories. And although he paid many visits to Scotland, notably to Islay with the Oxford Ornithological Society in 1936, it is in connection with the Isle of May that he has had most influence north of the Border. He was also a visitor to Fair Isle and on one trip saw from the boat what he was sure was Bulwer's Petrel, but which he, the author of *Birds of the Ocean,* refused to mention in print, as the view was so brief: a model of scientific caution which might be followed by many today.

But his influence must also be a general, all-British one. After his work in Australia, when his many journeys from there to South America in search of the cactoblast, resulted in *Birds of the Ocean,* a pioneer work with diagrammatic sketches still essential to the sea traveller, he was appointed first director of the Edward Grey Institute at Oxford and was thus perhaps the first professional ornithologist in Britain, a pioneer in this, as in so many other, modern trends. He was closely connected with *The Handbook* and, after the death of F. C. R. Jourdain, took over his sections of the work. His influence on others is as important as that of his published writings, and he, with B. W. Tucker, in the Oxford of the 1930s, initiated a new school of ornithologists. Those who today all over Britain are making censuses, making field identifications, and trapping birds for ringing are unaware how much their systems and techniques owe to this father of modern ornithology. He had an encyclopaedic knowledge of bird literature combined with an extensive memory, and the library of the Edward Grey Institute is his deserved memorial.

It is pleasant in a famous ornithologist to find a taste for the lighter side of the subject: W.B.A., just as he kept maps of Britain with every road marked along which he had driven, so kept a bird list for every British county. The present writer has had the privilege of bashing a hedge, in order that a Willow Tit might be driven out of Herts into Bucks for his benefit. Let not the modern ornithologist, who so often mistakes for knowledge the ability to count things, despise this attitude. If a man is able to make his profession also his hobby he is blessed, and W.B.A., with his exceptional memory, could use his list-making for a very thorough knowledge of bird distribution.

In person he was short and round—*un gentil bonhomme,* as

a French ornithologist affectionately described him. With his hat, his gumboots and his stick with a crook (so that it could be hung over the arm when he used his fieldglasses), his field characters were unmistakable. His round gold spectacles gave him an owl-like look of wisdom and, as you spoke to him, he would fix you through them, uttering, as a mark of attention, a curious plaintive *mm, mm, mm,* which remains one of the most memorable and lovable things about him. He was ready to laugh, or rather chuckle, and was always especially pleased by rather learned jokes about birds. On reading in the paper about a poor mad woman in a London park who, in order to protect her friends the sparrows from imagined persecution, used to put them in her mouth, W.B.A. asked: "And did she bring up pellets?" He has been known to complain about trifles, but often amusingly, as for example, about lunch in a country hotel: "the whole thing was cold, except the icecream."

He had plenty of talents; a very wide knowledge of English literature was among them. He was also a first-class swimmer. Once on the Isle of May, when the storm cone was hoisted, he swam round the rock at the entrance to the harbour and, when disbelief was expressed, did it again as proof. He was then over fifty. A disappointment was that never in his long life did he manage to see a Little Auk, and mention of that bird in his presence was almost embarrassing. Nor, although he compiled a monograph on the Woodcock so extensive that it was the chief feature of *The Ibis* from 1945 to 1947, did he ever have the luck of seeing a Woodcock carrying its young: "I don't believe it does it at all!" he once exclaimed crossly.

One of three famous ornithologist brothers, he died shortly before Christmas 1965. It is hard to think that he was over eighty, and hard to imagine the world of ornithology without him. His generosity with his experience, knowledge and advice will not be forgotten by those who benefited from them.

M. F. M. Meiklejohn.

Reviews

Birds of the Atlantic Islands. Vol. 2. A History of the Birds of Madeira, the Desertas, and the Porto Santo Islands. By D. A. and W. M. Bannerman. Illustrated by D. M. Reid-Henry. Edinburgh and London, Oliver & Boyd, 1965. Pp. xlviii+207; 9 plates (8 in colour); 38 line drawings and fold-out map. 26¾ x 18¾ cm. 84/-

Originally it had been Dr Bannerman's intention to include the birds of the Madeiran islands and of the Azores in one volume but he has now sep-

arated the two groups, leaving the Azores to be dealt with in volume 3. His final aim is to complete the Atlantic Islands series with a fourth volume on the birds of the Cape Verde Islands. A change from volume 1 (see 3:45) is that Dr Bannerman shares the authorship with his wife, although he remains entirely responsible for writing the text.

In a historical introduction, which is preceded by a bibliography of the literature on Madeira, the reader is given a detailed and extremely interesting account of the numerous ornithologists, past and present, who have furthered the knowledge of Madeiran birds. Foremost, perhaps, of this distinguished company were Ernest Schmitz, a German padre, who resided on Madeira from 1874 to 1908, and the Portuguese, Senhor Adolfo de Noronha, who lived on the barren island of Porto Santo during the years 1900-1903. A criticism of volume 1 was that it did not contain an account of the topography and climate of the Canary Islands. Such an omission is rectified in this volume in a special chapter contributed by G. E. Maul, Curator of the Museu Municipal do Funchal, who gives a lucid description of the topography, climate, vegetation and geology of the Madeiran archipelago. Tucked inside the back cover of the book where it is readily available for reference is a useful, folding map.

Despite a similarity of habitats shared by the two island groups, it is rather surprising to find that there are considerably fewer resident species than in the neighbouring Canaries. Many common Canarian species, ranging far afield in their choice of habitats, are absent from the Madeiran islands. Nevertheless, several of the breeding land and sea bird species are of exceptional interest, ranging from the Soft-plumaged Petrel, one of the least known of the Atlantic Islands seabirds, to the endemic Madeiran Firecrest, so aptly described by Meinertzhagen as an "exquisite and delicate little gem." Dr Bannerman deals fully and authoritatively with each individual species, and his text is often interspersed with vivid descriptive passages as, for example, the account of his trip along a levada edge to the dense mountain woods overhanging a steep ribeira in search of the magnificent Madeiran Laurel Pigeon, which Reid-Henry has so splendidly portrayed in the frontispiece. Many problems, particularly regarding the breeding biology of the insular land birds, remain unsolved: an excellent opportunity awaits a resident ornithologist prepared to undertake an intensive study of these species.

About 170 migratory species have been recorded in the islands but barely a quarter of these occurs with any regularity. It might perhaps have been advantageous to have divided this section into two parts, one dealing with the regular passage migrants and another with irregular migrants and rare vagrants. Incidentally, the authors are to be congratulated on adding three new species to the Madeiran list. Appendices deal with unconfirmed and unsatisfactory records, the origin of migrants, ringing records, and additions and corrections to volume 1.

The eight coloured plates, depicting 14 species, by D. M. Reid-Henry are of outstanding merit and, in addition, a few of them portray distinctive features of the Madeiran landscape. Although it is difficult to single out any one painting of this delightful set, the reviewer's choice is the enchanting study of the Madeiran Barn Owl. As in volume 1 the line drawings by various artists enhance the pages of the text.

This rich, fascinating and superbly illustrated book will not only be a valuable source of reference to the expert ornithologist but will provide the visiting birdwatcher with an indispensable guide to the birds of Madeira and their diverse habitats.

D. MACDONALD.

Birds in the Balance. Survival Books series No. 5. By Philip Brown. London, Deutsch, 1966. Pp. 124; 15 photographs (9 plates), one in colour. 21 cm x 16½ cm. 25/-.

As an indication of the scope of this book it should be recorded that its stated aim is to be an introduction to some of the problems of conserving wild birds. It consists of eight chapters dealing with: why conserve? the historical background, the concept of the bird reserve, the post-war revolution, legislation (safeguard or shibboleth?), conservation and sport, introductions and re-introductions, bird reserves (some problems and experiments), and birds in the balance. The chapters are basically individual essays, possibly written to pre-selected titles, and they do not succeed entirely in presenting a logically connected narrative.

I have not found *Birds in the Balance* easy to review, although it is short and can easily be read through at a sitting. It is pleasantly and informally written, holds one's attention, and performs a useful service in outlining the development of conservation thinking in the realm of bird preservation. Yet at the end I had doubts if I would ever wish to read it again, or to refer to it for the development of new ideas, so can I honestly recommend it as a book to buy? Suffice, that it is one that I am glad to have read, and that others should read: how they get hold of it is their affair.

In a somewhat florid and over-written foreword, Aubrey Buxton says that this is not another book just about birds, but a book about people and about what people have done about birds. "It is really about us, us frightful bird people... and of the splendid muddles we have managed to contrive, or allowed others to perpetrate, in the grand cause of keeping Britain a good bird place for our descendants." He states also that it is "a stirring account of the wonderful things that have been done, particularly since the war."

All this is true enough. Philip Brown is a well known figure; as the blurb tells us, he served with the R.S.P.B. for 17 years—for 11 of them as Secretary—and is now the editor of the *Shooting Times*. He is therefore in a position to take a broad view, and so he does. Equally, he has a fund of reminiscence to draw on, and does not hesitate to use it. This makes for good reading, and if at times the anecdotes tend to obscure the main theme this is understandable and readily forgiven, for there are some good stories. What is more unsatisfactory is that sometimes—and in particular in his chapter on legislation—Mr Brown is over-destructive and insufficiently constructive. In bird conservation, as in many other fields, what is needed is not so much new legislation or better law enforcement but a more enlightened public opinion, itself the most effective authority and sanction. Surprisingly, in view of his own close association with the project, the author does not stress as much as he might the splendid work done by the R.S.P.B. in safeguarding the Speyside Ospreys by making them of personal concern to so many ordinary people; it is not only the Ospreys that have benefited, but all the birds of Scotland and beyond.

The choice of illustrations is disappointing; nearly half are of shot or trapped birds, and not all are particularly apposite. None of these is dated, and several have appeared before. It would be especially interesting to know just when the picture was taken of eight Buzzards and a Merlin decorating a keeper's shed, and that of two Sparrowhawks on another gibbet. One might be forgiven for wondering from these if the reduction of birds of prey by toxics and traps has been as great as is popularly supposed.

W. J. EGGELING.

The Owl Family. By Frank Wenzel. Translated from the Danish by F. H. Lyon. British edition. London, George Allen & Unwin, 1966. First published in Denmark 1965 (or 1963?) as "Hvad Hojen Fortalte." Pp. 132; 32 colour photographs. 25¾ cm x 19 cm. 35/-.

A succinctly described cameo of wildlife by the author of *The Buzzard,* centred on a family of Long-eared Owls on a Danish estate. A.T.M.

The Golden Eagle. By Robert Murphy. Illustrated by John Schoenherr. British edition. London, Cassell, 1966. Previously published in America, 1965. Pp. 157; 11 drawings. 21 cm x 13¾ cm. 25/-.

Vividly written biography of an imaginary American Golden Eagle, by the author of *Varda: the Flight of a Falcon.* A.T.M.

The Living Air. The Memoirs of an Ornithologist. By Jean Delacour. Foreword by Peter Scott. London, Country Life, 1966. Pp. 173; 17 plates (35 photographs). 23½ cm x 15½ cm. 45/-.

Attractive autobiography of world-famous ornithologist, author of *The Pheasants of the World, The Waterfowl of the World* (4 vols.) and other works. A.T.M.

Letters

SIR,

The Birds of Renfrewshire

The Council of the Paisley Naturalists' Society and the Department of Natural History, Paisley Museum, are collaborating in a complete resurvey of the natural history of Renfrewshire, last undertaken by the Paisley Naturalists' Society almost exactly fifty years ago. It is hoped to publish a series of up-to-date handbooks on each subject, and we have been appointed Recorders-for-Birds by the Joint Committee.

In 1948 Dr Gibson and the late T. Thornton MacKeith produced a joint manuscript on the "Birds of Renfrewshire" but owing to the sudden and unexpected death of MacKeith this was never published. We are now revising this and bringing it up to the end of 1965—fifty years after the last comprehensive accounts of Renfrewshire birds:

MALLOCH, T. 1915. Renfrewshire birds. *Trans. Paisley Nat. Soc.* 2: 69-84.
ROBERTSON, J. & MACKEITH, T. T. 1915. The birds of Renfrewshire. *Scot. Nat.* 1915: 124-127, 244-250, 268-275.

We shall be very glad indeed to hear from anyone who has unpublished information on Renfrewshire birds or who knows of records published in an out-of-the-way journal; records in the standard journals will have been noted.

We are hoping to include a tribute to Thornton MacKeith, the leading Renfrewshire naturalist of his generation, but we are having difficulty in finding a photograph suitable for publication. If anyone possesses such a photograph we should

be very glad to be allowed to borrow it.

If anyone can assist we shall be very grateful if they will communicate with us at the Museum, High Street, Paisley, or at Foremount House, Kilbarchan, Renfrewshire. All letters will be answered, and full acknowledgment of all assistance received will be made when the handbook is published.

J. A. GIBSON, JAMES ANDERSON.

SIR,

Notes on the birds of Berneray, Mingulay and Pabbay

In their paper on the birds of Berneray, Mingulay and Pabbay (3: 397-404), Diamond, Douthwaite and Indge give an account of the birds they found there in June and July 1964. From 15th July to 7th August 1965 a further party from Cambridge visited Berneray and Mingulay, and changes in the status of several species were noted.

Diamond *et al.* found no trace of petrels on the islands, but at 0530 hrs GMT on 17th August 1965 a single Storm Petrel was caught in a mistnet in the marshy area just above the landing slip on Berneray. No other petrels were seen or caught during our stay although the nets were left up for three days and nights under constant observation. There was no evidence to show whether or not this bird was breeding.

Although Golden Eagles were seen throughout our stay in 1964, none at all was seen in 1965. It seems worth recording that sheep dips containing Dieldrin are used on the islands, although there is no evidence to connect this with the disappearance of the eagles.

Four or five Swifts were regularly seen circling round a west-facing gully on Berneray, and the lighthouse keepers reported that they had been present for some time. None was recorded in 1964.

There is no recent record of Corncrakes south of Barra; in 1965, at least two were heard calling throughout our stay on Berneray, and two were caught in a mistnet on 20th July.

Song Thrushes had increased on Berneray to four pairs—two in the village, one just above the landing slip, and one at the lighthouse. On Mingulay there were two pairs in the village, but only one nest was found. In addition, single birds were seen on the north slopes of Carnan, and on Solon More, a stack to the northeast of the island.

Migrants included a moribund Tree Sparrow at Berneray lighthouse on 3rd August, several Redshanks on the east point of Berneray and a Dunlin on Mingulay on 2nd-3rd August.

D. P. L. WILLIAMS,

SIR,

Buzzard breeding in Clackmannanshire

In view of the report of Buzzards breeding in 1964 and perhaps earlier as the first record of breeding in Clackmannanshire (3: 410) some earlier notes of mine may be of interest.

In May 1956 I was informed of a nest in a 40 ft pine in a wood about 1½ miles west of Dollar. On the 13th I found three eggs in it and these were showing signs of hatching by the 22nd. I was unable to return for almost a fortnight, but on 5th June I found the nest severely damaged by stones thrown into it and two young birds dead. I estimated that one was about 12-14 days old and the other about six days old; there was no sign of a third young bird.

That was the first and only time I found a nest although I searched in 1957, 1958 and 1959 as Buzzards were still in the area.

GORDON M. CROSTHWAITE.

SIR,

Garden Warblers in West Stirlingshire

I see from the first records of Garden Warblers in West Stirlingshire (3: 396) that its status in this division has been neglected until lately and that breeding has not been recorded.

On 5th June 1954 I found a Garden Warbler on a nest with 5 eggs in a bramble clump in a deserted garden at Coillie Mhor, near Rowardennan. A week later I noted a bird near Balmaha. In 1955 one was singing in scrub woodland on the east side of the Endrick mouth on 22nd May and there were a number in the area on 9th June, especially in bramble and rhododendron wilderness near Buchanan Castle. On 15th June 1957 I found a cock's nest after hearing one singing at Clairinsh, an island off the mouth of the Endrick.

For completeness I may mention my records from nearby areas at that time—a bird by the Lake of Menteith, South Perthshire, on 27th May 1956; three singing near Aberfoyle in woods at Duchray Castle, East Stirlingshire, on 25th May 1957; and three between Ardlui and Glen Falloch, Dunbartonshire/Perthshire, on 1st June 1957.

H. MEYER-GROSS.

SIR,

Notes from the Isle of Iona

In their notes from Iona (*Scot. Birds* 4: 80-81) Kerr and Hope say they saw no sign of Rooks having bred there. They have done so for a fairly long time round the manse—since at least 1948 I understand.

W. J. EGGELING.

(At Dr Eggeling's suggestion we wrote to Dr D. S. Stiven just before he retired from being minister on Iona. He told us that the Rooks were there when he came to the island in 1958, and was able to take the story back to the early 1940s. He put us in touch with the Rev. D. MacCuish of Galashiels who was on Iona from 1933 to 1940, remembered that the birds were already there in 1933, and referred us back to Peter Macinnes on Iona. Here at last the loose threads of the tale were woven together. Early in his ministry in the period 1890-1930 the Rev. Archibald MacMillan planted trees in a spare part of the manse policies, and these flourished. The Rooks seem to have first come to breed in the early 1920s and they have nested ever since at a fairly steady level of 20 to 30 pairs (sometimes rather more or less). There is a daily influx from the woods of Mull, and especially on stormy days they fly very low in the trough of the waves.

We have also been reminded by T. Hedley Bell that in "Some notes on the birds of Mull and Iona"—deposited in the S.O.C. Library—he had a note of a party of about 10 Knot flying over the island on 28th August 1963 which displaces the 1965 record as the first for Iona.—ED.)

Request for Information

Influx of Great Shearwaters in autumn 1965. September 1965 heralded one of the largest influxes on record of Great Shearwaters to British and Irish waters. The biggest numbers were seen in southwest Ireland, but it is apparent that the birds were widespread around our coasts, numbers being seen at Fair Isle and to the northwest of the Scottish mainland. Also involved were Sooty Shearwaters and very much smaller numbers of Cory's Shearwaters. At the suggestion of the Seabird Group and *British Birds* A. Gibbs and R. G. Newell have agreed to collect all records relating to the distribution of these three species in the north Atlantic and western Europe during the summer and autumn of 1965 with a view to publishing a paper. Anyone who has records of Great, Cory's and Sooty Shearwaters for this period is asked to send them to R. G. Newell, 55 Avonmore Road, West Kensington, London W.14.

The Scottish Ornithologists' Club

NINETEENTH ANNUAL CONFERENCE
HOTEL DUNBLANE, PERTHSHIRE
21st to 23rd October 1966

Friday 21st October

5 to 7.30 p.m. and 8 to 9 p.m. Conference Office in the Hotel Dunblane opens for members and guests to register, and collect name cards and Annual Dinner tickets.

6.15 p.m. Meeting of Council.

8.30 to 9.30 p.m. S.O.C. BIRD-ISLAND STUDY CRUISE FILM AND SLIDE PROGRAMME in the Ballroom. At 9.30 excursion leaders will describe places to be visited on Saturday and Sunday afternoons.

9.30 p.m. to midnight Lounges available for informal discussions and refreshments (late licence).

Saturday 22nd October

8.45 to 9.15 a.m. Conference Office opens for registrations.

9.20 a.m. Official Opening of the Conference in the Ballroom. ADDRESS OF WELCOME by the Provost of Dunoon.

9.30 a.m. LECTURE, "Problems of Irruptive Bird Migration" by Dr Staffan Ulfstrand (Lunds Universitets Zoologiska Institution, Sweden), followed by discussion.

11 a.m. INTERVAL for coffee and biscuits.

11.30 a.m. LECTURE, "Irruptions in the British Isles" by R. K. Cornwallis (former Vice-President of the B.T.O.), followed by discussion.

1 to 2 p.m. INTERVAL for lunch.

2 p.m. EXCURSIONS by private cars leaving the Conference Hotel car park. Details will be posted on the Conference notice board.

3 p.m. MEETING for R.S.P.B. members in the Ballroom.

6 p.m. 30th ANNUAL GENERAL MEETING OF THE CLUB in the Ballroom.

BUSINESS:

(1) Apologies for absence.
(2) Approval of Minutes of 29th Annual General Meeting of the Club held in Dunblane on 23rd October 1965 (see "Scottish Birds" 3: 438-440).
(3) Report of Council for Session 29.
(4) Approval of Accounts for Session 29.
(5) Appointment of Auditor.
(6) Election of President of the Club. Dr I. D. Pennie, having completed three years term of office, is due to retire. The Council recommends the election of Dr W. J. Eggeling.
(7) Election of Vice-President. The Council recommends the election of A. Donald Watson to succeed Dr W. J. Eggeling.
(8) Election of new members of Council. The Council recommends the election of Dr David Jenkins and

R. G. Caldow to replace Dr G. M. Dunnet and Dr D. H. Mills who are due to retire by rotation.

(9) Any other competent business.

7.30 for 8 p.m. ANNUAL DINNER in the Diningroom of the Hotel Dunblane (dress informal).

Sunday 23rd October

9.30 a.m. LECTURE, "Range Changes in European Birds" by Stanley Cramp (Senior Editor of "British Birds"), followed by discussion.

11 a.m. INTERVAL for coffee and biscuits.

11.30 a.m. FILMS, "Steller's Albatross (Diomedia albatrus) in Torishima Island, Japan", and "The Private Life of the Kingfisher" (awarded the Diploma of Merit in the first National Festival of Nature Films 1966).

1 to 2 p.m. INTERVAL for lunch.

2 p.m. EXCURSIONS by private cars leaving the Conference Hotel car park.

Conference Office

Outwith registration hours the Conference Office will also be open at intervals during the weekend for members to see the exhibits. A wide selection of new books from the S.O.C. Bird Bookshop will be displayed for purchase or orders. R.S.P.B. literature, Christmas cards, garden bird equipment and gramophone records will be on sale, and also a selection of B.T.O. literature and Christmas cards.

Film and Slide Programme

The programme from 8.30 to 9.30 p.m. on Friday evening is intended to give members and guests an opportunity of showing 2" x 2" slides or 16 mm films taken on the Cruise. These must however be submitted beforehand to the Conference Film Committee, and should be sent, **by 7th October at the latest,** to the Club Secretary, 21 Regent Terrace, Edinburgh 7. The slides should be titled and sent with brief notes on what will be said about them, to enable the Committee to make a selection and to form a good programme. It will not be possible to show material **which has not** been received by this date.

INFORMATION

(1) **Hotel Reservations.** All reservations must be made direct. Owing to the shortage of single rooms, members are urged to make arrangements to share a room with a friend.

(2) **Conference Post Card.** It is essential that members intending to be present should complete the enclosed printed post card and send it to the Club Secretary **not later than 17th October.** Because of limited seating accommodation, the Council regrets that members may invite only one guest each to the Annual Dinner.

(3) **Registration.** Everyone attending the Conference must register on arrival (10s each) at the Conference Office (for opening times, see Programme). Members attending only the Annual General Meeting do not require to pay the registratioon fee, which covers morning coffees and incidental expenses.

(4) **Annual Dinner.** Tickets for the Annual Dinner (price 25s inclusive of red or white wine or fruit cup, and of gratuities) shuld be purchased when registering. Members and guests staying in the Conference Hotel pay for the Annual Dinner in their inclusive hotel account, but must obtain a

dinner ticket from the Conference Office as all tickets will be collected at the Annual Dinner. No payments should be made in advance to the office in Edinburgh.

(5) **Other Meals.** Dinner on Friday evening is served in the Conference Hotel from 6.30 to 9 p.m. Non-residents will be able to obtain lunch on Saturday or Sunday by prior arrangement with the Hotel Reception desk.

(6) **Swimming Pool.** The indoor swimming pool in the Conference Hotel will be available during the weekend at no extra charge.

(7) **Excursions.** Members are asked to provide cars if possible and to fill their passenger seats; to avoid congestion in the car park the minimum number of cars will be used. The following 1" O.S. maps cover the area: Old Edition 62, 63, 66 and 67; New Edition 53, 54, 55, 60 and 61. Members wishing to go out on their own are particularly asked not to go in advance of led excursions to avoid disturbing the birds.

Hotels in Dunblane

Hotel Dunblane (Hydro) (Tel. 2551). Special Conference charge £7.11.0d (or 75/6 per day) including service charge, covering bed and all meals (except tea on Saturday afternoon) from Friday dinner to Sunday lunch, after-meal coffee, and the Annual Dinner (with wine or soft drinks). For less than a full day, bed and breakfast is 42/-, lunch 11/6 and dinner 17/6.

Stirling Arms Hotel (Tel. 2156). Bed and breakfast from 25/-.

Neuk Private Hotel, Doune Road (Tel. 2150). B & B 20/- to 23/-.

Schiehallion Hotel, Doune Road (Tel. 3141). B & B 18/6 to 20/6.

Ardleighton Hotel (near Hotel Dunblane gates) (Tel. 2273). B & B 17/6 to 21/-.

Hotels in Bridge of Allan (3 miles from Dunblane)

Members with cars who have difficulty in getting single rooms in Dunblane should find these two hotels have ample accommodation.

Allan Water Hotel (Tel. 2293). B & B 37/6 to 42/-.
Royal Hotel (Tel. 2284). B & B from 39/-.

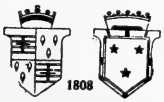
Owing to the Selective Employment Tax all hotel prices, except for the Conference Hotel, are provisional and should be confirmed.

SUBSCRIPTIONS, COVENANTS AND BANKER'S ORDERS

Your subscription for the new session is now due and should be sent at once with the enclosed form to the Club Secretary or paid to Branch Secretaries. The winter number of the journal will only be sent to paid-up subscribers.

If you pay income tax at the full rate and have not already signed a seven-year Deed of Covenant, this is the way you can help the Club funds at no extra cost to yourself, as the tax we are allowed to reclaim on a subscription of 25s is nearly 18s. If only 50% of our members signed Covenants the Club would gain an annual income of nearly £600, which could be used to give increased services through the journal and other publications, Conferences and lectures, more reference books for the Library, and in many other ways. May we invite you to use the enclosed form, which should be sent on completion to the Secretary, who will forward a Certificate of Deduction of Tax for signature each year.

A Banker's Order is enclosed for the use of members who find this a more convenient way of paying the annual subscription, and it will also help to lessen the administrative work in the Club office; this should be returned to the Secretary and not to the Bank.



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The London Natural History Society

This Society, which covers all branches of natural history, has a strong ornithological section. Lectures, film shows, practical demonstrations and field meetings are arranged and research work is undertaken, most, though not all, of these activities taking place within the Society's area, that is within a 20 mile radius of St Paul's.

Members of this Society help run the independent Dungeness Bird Observatory, which provides experience in bird ringing, studying birds in the hand and migration watching.

The London Bird Report, compiled by the Ornithological Section and published annually, includes papers, facts and figures of special interest to bird watchers in London.

Further details can be had from the General Secretary:

MRS L M. P. SMALL,
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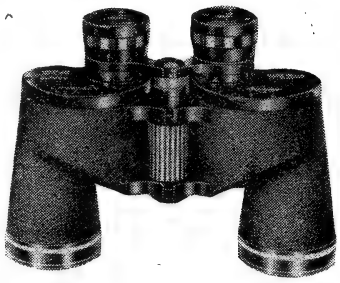

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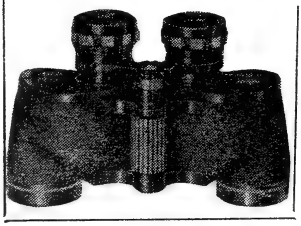

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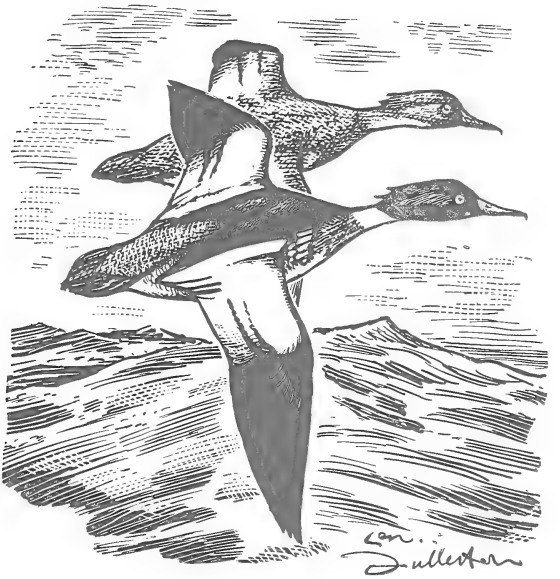

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The Scottish Ornithologists' Club

Vol. 4 No. 4 *Winter 1966*

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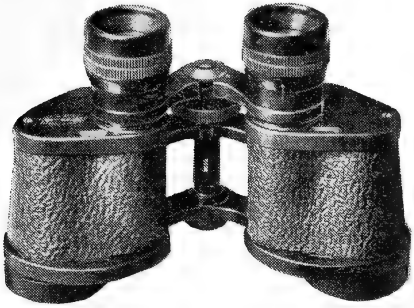

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THE JOURNAL OF THE SCOTTISH ORNITHOLOGISTS' CLUB

Volume 4 No. 4 **Winter 1966**

Edited by A. T. MACMILLAN with the assistance of D. G. ANDREW, T. C. SMOUT and P. J. B. SLATER. Business Editor, T. C. SMOUT.
Cover Design (Red-breasted Mergansers) by LEN FULLERTON.

Editorial

"The Birds of the Western Palearctic." Perhaps more than any other factor in recent years the publication of *A Field Guide to the Birds of Britain and Europe* led British amateur birdwatchers to look at birds in a wider context than whether or not they were on the British List. The book filled a great need for a good pocket guide to the birds that might be seen on a continental holiday. Translated into numerous languages it proved not only a spur to birdwatchers to explore all over Europe but also the means whereby they could identify the birds they saw with comparative ease.

Correct identification is however a mere preliminary to more serious topics. Here there is an equally great need for everything to be brought together. Ornithology has surged ahead in the last 20 years and a tremendous amount is known of the basic facts about European birds; but it is scattered through so many books and journals that much of it is inaccessible and easily overlooked.

The editors of *British Birds* (59: 321-324) have just announced most ambitious plans to put this right in the early 1970s with a seven-volume work covering the whole of Europe west of Russia plus the Mediterranean countries of North Africa and east to Turkey. The promised contents make one's mouth water, and it will obviously be one of the major ornithological works of the next decade. One can readily believe that it will do as much to channel serious ornithological study as the *Field Guide* has done to stimulate an international outlook in birdwatching.

"Nature Trails 1966." This is the title of a new Council for Nature publication. Well over 50 trails (12 in Scotland) are listed county by county with details for each trail of how to get there, when it opens, its length, habitat and interest, who is responsible for it, and where to get a guide or permit.

This useful list may be had for 1/6d from the Information Officer, Council for Nature, c/o The Zoological Society of London, Regent's Park, London N.W.1. A well planned nature trail is a most valuable means of interesting all sorts of people in natural history, and it is good to see that the idea is spreading.

Scottish Bird-Islands Study Cruise. The organisers of the cruise can now be very glad that all the work is over and that it was such a success. Yet many S.O.C. members must still have only a hazy idea of the whole operation. We hope that Nancy Gordon's account, illustrated with photographs and the first cartoons to be published in *Scottish Birds*, will bring it to life for those who did not go on the trip.

S.O.C. Annual Conference. The nineteenth annual conference of the Scottish Ornithologists' Club was held in Dunblane at the end of October. Somehow Irene Waterston had found time to organise it at the same time as dealing with the climactic stages of the cruise and compiling an extensive winter programme of branch lectures. As usual it was a highly enjoyable and valuable weekend. R. K. Cornwallis and Dr Staffan Ulfstrand linked up skilfully in their contributions on irruptive migration, stimulating an excellent animated discussion of the subject. Stanley Cramp presented a broad survey of changes in the ranges of birds in Europe and of some of the factors involved. There were films and slides of the cruise, Japanese films of cranes and albatrosses, and an absolutely superb prize-winning film on "The Private Life of the Kingfisher," top favourite with cruise passengers three months earlier.

Waxwings. The invasion of Waxwings in the autumn of 1965 was greater than any recorded before. Records from more than 1000 people are being worked upon by M. J. Everett, 21 Regent Terrace, Edinburgh 7. From as early as the middle of October 1966 there have been reports of another invasion and all records of this one also will be welcomed by Mr Everett if they have not already been sent to the editor.

Collared Doves. A small press notice early in September indicated another milestone in the spread of the Collared Dove. Officially it now becomes an ordinary common British bird. No longer will it be specially protected with a £25 penalty; its value will be reduced to the standard £5. This is an entirely realistic move. One may well wonder whether this bird may yet complete the highly improbable transition from specially protected Schedule 1 rarity to outlawed Schedule 2 pest.

Current literature. Recent papers and reports of special interest to Scottish ornithologists include:

Nature Conservancy Unit of Grouse and Moorland Ecology, Twelfth Progress Report, 1966. Pp. 76+. Duplicated typescript. Studies of Red Grouse from many angles, and also of Ptarmigan, Black Grouse, Capercaillie, Golden Eagle, Crow, and roe and red deer.

A census of the Great Crested Grebe in Britain 1965. Ian Prestt and D. H. Mills, 1966. *Bird Study* 13: 163-203. Half the Scottish population still in Fife, Perth and Angus, but total of 311-351 birds at end of May 1965 was about twice that in 1931.

The plumage of the Fulmars of St Kilda in July. W. R. P. Bourne, 1966. *Bird Study* 13: 209-213. Suggestion that birds in wing moult with mottled mantles might be senile, discussed in relation to mechanics of population expansion.

Catching wildfowl by artificial light. R. H. Dennis, 1966. *Ann. Rep. Wildfowl Trust* 17: 98-100. Fair Isle techniques.

Movements and flock behaviour of Barnacle Geese on the Solway Firth. E. L. Roberts, 1966. *A.R.W.T.* 17: 36-45. Data on Caerlaverock flock—up from 1000 in 1957-58 to 3700 in 1965-66.

Winter food habits of Capercaillie in north-east Scotland. F. C. Zwickel, 1966. *Brit. Birds* 59: 325-336. Eats mainly Scots pine.

Purple Sandpipers feeding above the littoral zone. Letters from E. Waters and C. J. Feare, 1966. *Brit. Birds* 59: 345-348. Habit noted in Shetland and O. Hebrides.

The seabirds of the Forth islands. R. W. J. Smith, 1966. *Seabird Bull.* 2: 58-60. Changes in past ten years.

Recording breeding seabirds on Sumburgh Head. M. Carins, 1966. *Seabird Bull.* 2: 63-65. Preliminary discussion.

Colour marking of Sandwich Terns. A. J. M. Smith, 1966. *Seabird Bull.* 2: 49-51. Methods used in Aberdeenshire study.

The status of the Chough in the British Isles. Richard Rolfe, 1966. *Bird Study* 13: 221-236. Scottish population dropped sharply to about 70 birds, all in Argyll, in 1963 (11 breeding pairs found).

The migrational dispersal of British Blackbirds. D. W. Snow, 1966. *Bird Study* 13: 237-255. Fresh analysis of ringing data.

Waxwings in Scotland. M. J. Everett, 1966. *Birds* 1: 92-93. Preliminary summary of 1965-66 greatest-ever invasion.

The Scottish Bird-Islands Study Cruise—an intimate account

NANCY J. GORDON

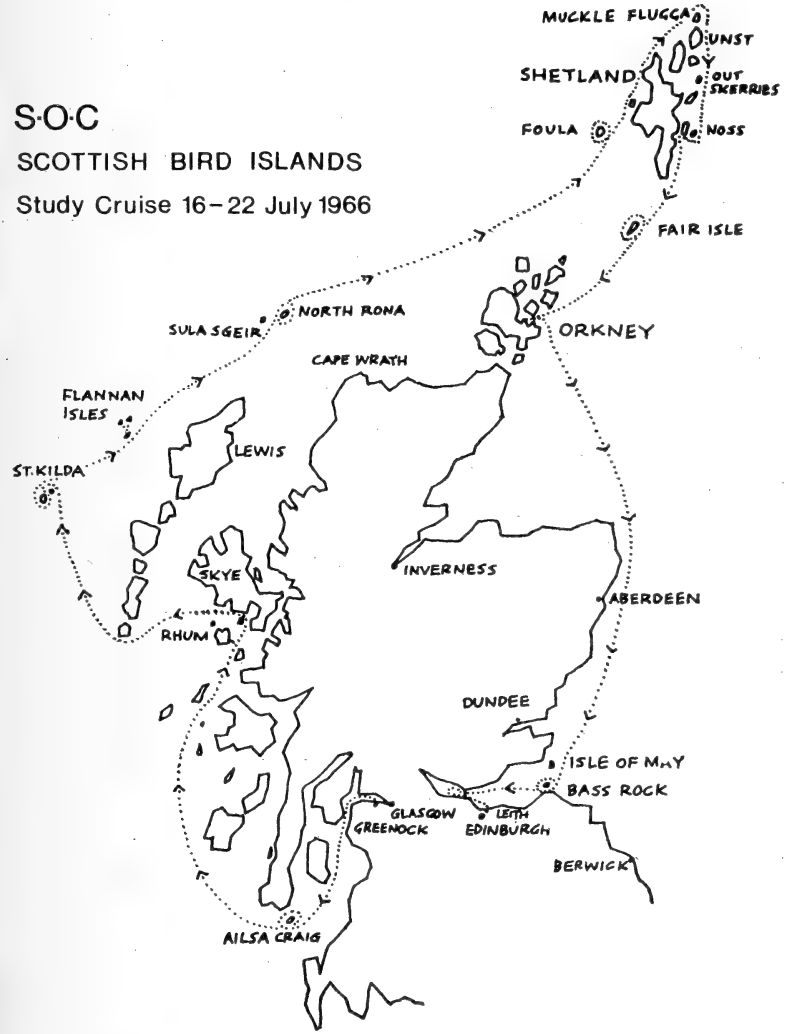
(Plates 28-39)

On a calm sunny day in the middle of July 1966 the cruise ship m.s. *Devonia* steamed slowly down the Clyde with over 900 ornithologists on board from all over the world, on the start of a memorable tour of Scottish bird-islands, planned and executed by the Scottish Ornithologists' Club. Nearly 400 of the passengers were delegates to the International Conference on Bird Preservation and to the 14th International Ornithological Congress held in Cambridge and Oxford before and after the cruise, which was the official excursion for both these gatherings.

The huge success of the venture may be summed up by one delegate's remark: "I have attended the Congress; but I have lived the Cruise." Add to this the many verbal thanks and over a hundred letters, some quite lyrical, which flowed in afterwards, praising especially the planning and organisation and the friendly atmosphere on board. "To describe the excellence of the planning and organisation to those who were not there would be almost impossible," as David Wilson put it in *B.T.O. News*. There are three good reasons for a success greater than anyone had dared to hope: the hours, days and months of work and careful planning by the Cruise Committee—above all by the secretary, Irene Waterston; the carrying-out of all these plans on board by cruise staff and a band of willing helpers (mostly S.O.C. members); and, last but not least, the cheerful cooperation of passengers and crew and the spirit of goodwill (helped by good weather) which pervaded the whole cruise.

Many cannot have realized quite how much preparation was necessary. The burden borne by Irene Waterston could best be illustrated by a photograph of her hard at work behind a typewriter, stacks of letters, a card index and numerous files, seen dimly through a haze of smoke late at night in the basement office at Regent Terrace.

To go back to the beginning, it is reputed (but may be disputed) that it was James Fisher who first thought of the cruise, way back in 1962 when Britain was chosen as the venue for the next I.O.C. At this stage is was hoped that the Congress might be held in Edinburgh, but later that year Oxford was chosen and the S.O.C. (with great abandon) agreed to organise a water-borne excursion for the delegates, later extended to include a day in Edinburgh and a reception



at the University. By the end of 1962 the British India Company had been approached and m.s. *Devonia* provisionally booked for mid July 1966. Things lay fairly dormant for the next two years, but by January 1965 an official Cruise Committee had been formed from S.O.C. Council members, with Irene Waterston as secretary, Joe Eggeling as chairman and cruise leader, and George Waterston, Maxwell Hamilton, Ian Pennie, Alastair Macdonald, Chris Mylne and Ian Munro as members. They were assisted then and later,

particularly on sub-committees, by Dougal Andrew, Charles and Marjorie Waterston, and others. Meetings were held on average once a month, but in the early days and in the end towards C-Day, when the pace was hottest, there were meetings two or three times a week, and even on a Sunday. In the earliest stage, financing the cruise was the main worry, but a solution was found by floating a Limited Liability Company (S.O. Cruise Ltd) in August 1965 with guarantors from within the Club. Prices had been decided—£30 for dormitory; £54 to £75 for cabin passengers—and a good deal of work had been put into preparing a leaflet about the cruise. This brochure, printed free of charge by Oliver & Boyd Ltd, well known as publishers of many fine bird books, as a contribution towards the cruise, bore an attractive vignette of St Kilda on the cover. Copies were posted in April 1965 to Oxford and New York—where the Audubon Society kindly agreed to handle distribution and replies—for sending on to Congress applicants. Press notices went out to editors of ornithological journals for their summer issues, and appeared again in autumn and winter issues. From then on the bookings rolled in; priority was given to Congress delegates and overseas applicants, but several hundred other ornithologists would be needed to fill the ship, and it was some months before the target seemed certain to be accomplished. In the event, fears were groundless and by October all 200 cabin places were booked and about half the dormitory ones; the others soon filled and about 140 applicants were disappointed. The day before the cruise there was still a waiting list of 40 who were prepared to take a last-minute cancellation. Dealing with bookings, cancellations, forms and cheques consumed much of the time of Irene Waterston and her assistant Fiona McLaren (specially recruited to the S.O.C. staff), not to mention the volume of other paperwork and telephone calls. One lengthy headache was the sorting of people into cabins and dormitories, and choosing dormitory leaders and sleeping companions.

Meanwhile, and assisted by the generous advice of the National Trust for Scotland, based on their wide experience of previous big ship cruises, the committee continued to deliberate on many other matters: planning the itinerary, possible stops and visits (distances, times and tides permitting); shore excursions to Rhum, Shetland and Orkney, involving guided walks, visits to archaeological sites, wet-weather shelter, special opening of shops, hire of buses, and even a specially constructed landing stage; preparation of a booklet about the places to be visited; arranging and timing the programme of films and lectures to fit in with meals and commentaries (and of course choosing and button-holing the lecturers); collecting material for exhibitions; choosing, cata-

loguing and packing books from the S.O.C. bookshop for sale on board; arranging press publicity for before, during and after the cruise; planning the final day in Edinburgh; preparing folders for each passenger to contain a name label, a cafeteria card (for dormitory passengers), cruise booklet, Rhum leaflet, bookshop list, special issues of *Scottish Birds* (for delegates), leaflets on the *Devonia* timetable and facilities, excursions and Edinburgh Day, and a letter of welcome from the cruise leader.

There was a slight panic at the time of the seamen's strike, until it was confirmed that, as an educational cruise, *Devonia* would not be affected. Perhaps the worst struggles were with the various transport arrangements, not only fleets of buses to Greenock, from Leith, on excursions, and to the reception, but also rail transport to the Congress after the cruise, for which special overnight sleepers were needed. This requirement led to a two-year struggle, the train being satisfactorily guaranteed only one month before the cruise, after the committee had taken the matter to their local Member of Parliament. Train troubles did not end there, and it will suffice to say that the confusion at Waverley at the final departure to Oxford was in no way the fault of the Scottish Ornithologists' Club, and that by a miracle it did not visibly dampen the strongly surviving spirit of goodwill.

So much for the 'before' and 'after', and even then only some of it—the rest can be told only by the organisers, by 16 fat box files, and by the bills for paper, telephone calls, cables and stamps.

At 5 p.m. on the eve of C-day an advance party left Regent Terrace for Greenock with a van load of books and an assortment of equipment and exhibition boards, much of this loaned by the National Trust for Scotland, in readiness for loading on board next morning. Eight persons slept that night in various corners of the S.O.C. headquarters and were joined by other staff on board the coach at 6.30 a.m. on the 16th, leaving Alastair Macdonald in charge of the fleet of buses from Edinburgh. The staff arrived at Greenock in time for their first orders from George Waterston. Armed with coloured flags, they began the task of welcoming and sorting the passengers into cabin and dormitory queues, and in little more than an hour all 900 were shepherded on board and consuming coffee. A special tribute is due to Alec Warwick, Jim Nicholson and Allen Aitken who came through to Greenock as part of the advance party and assisted in the preparation of the exhibition rooms, direction signs and map studies. All three had past experience of National Trust for Scotland cruises and knew exactly how best these things could be arranged.

At noon, 26 tons of anchor and cable were lifted and we slid past the sister ship *Dunera* down a calm Clyde towards Ailsa Craig, in brilliant sunshine. George Waterston opened the batting from the bridge with a commentary over the Tannoy as we passed the Cumbrae Islands, after which the coastline and islands of Scotland continued to unfold before our eyes accompanied by relevant (though occasionally irreverent) commentaries from the bridge on birds, other wildlife, geology, land forms, archaeology, vegetation, land use and history, given by James Fisher, Joe Eggeling, Charles Waterston, Ronald Miller, Sandy Fenton, George and Irene Waterston, James MacGeoch, Nancy Gordon and Tom Huxley, with others chipping in. Two of our overseas guests, Walter Thiede and Raymond Lévêque, gallantly undertook translations into German and French of nearly all the commentaries. A few spicy words were added here and there by the Captain, as when he hinted at the alternative name chosen for the Muckle Flugga by his fellow seamen, lying off that treacherous headland in submarines during the war. All this information, over the loudspeakers and in the cruise booklet, was some compensation for being unable to land on many of the enticing islands—Ailsa Craig, Soay, Canna, St Kilda, the Flannans, Sula Sgeir, North Rona, Foula, Unst, Fair Isle, the Isle of May, the Bass Rock and other Forth islands. However, we had excellent views of most of these (several of them National Nature Reserves) and saw a large proportion of Britain's seabirds, some of them concentrated in huge cliff-nesting colonies: Puffins, Guillemots, Razorbills, Kittiwakes, Fulmars, gulls, terns, skuas and six of the eight Scottish Gannet colonies, which represent half the world population of this species. Many other birds were seen—even the most common of them giving pleasure to overseas visitors who had never seen, for instance, a Skylark. Most of the seabirds were fairly unconcerned about the presence of an extra-outsized Gannet peering at them with 1800 eyes; a greater response was evoked from the inhabited islands, especially from lighthouses, which answered *Devonia's* foghorn salute with waved handkerchiefs and hoisted flags.

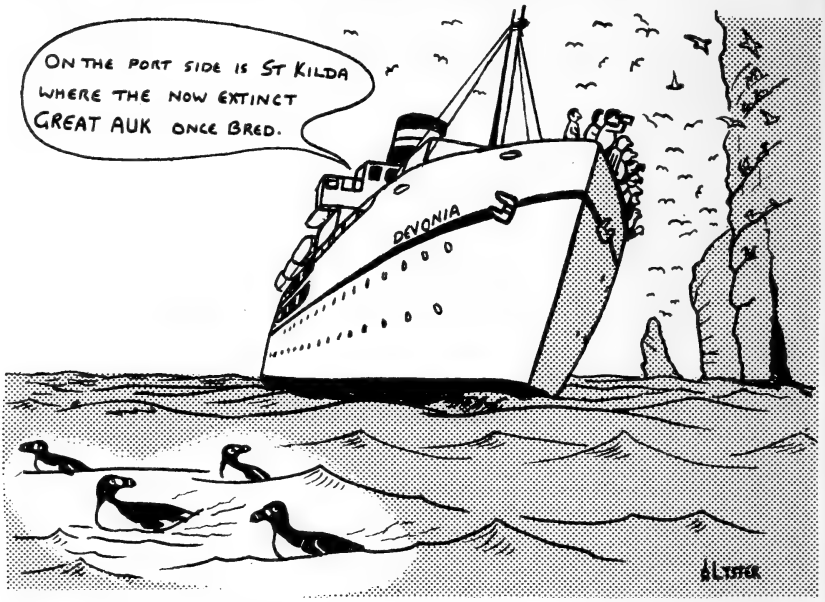
Sunday dawned sunny and warm for the first shore excursion, to the Isle of Rhum. The setting was perfect with distant blue views of Skye and the Cuillins, the mainland mountains from Kintail to Ben Nevis, and the surrounding islands of the Inner Hebrides. All went ashore in the ship's boats, assembled in front of the massive Kinloch Castle, and dispersed on excursions varying in energy from the ascent of Hallival and Askival or the walk to Kilmory Bay to a gentle potter along Kinloch Glen and the Bay, or just a snooze on the castle lawns. Kinloch Castle itself, with its period furniture, fantastic baths and mechanical organ,

proved a great attraction. The mountaineers saw the burrows of the huge Manx Shearwater colony on the higher slopes, and Red-throated Divers on the high lochans, as well as many red deer. Back on board, we cruised up Loch Scavaig in the sunset, close to the hills of Skye, passing Soay and Canna before night fell.

Next morning, in thick mist, cruising apparently in the open Atlantic, we suddenly saw a fantastic sight—great rock stacks rising five or six hundred feet sheer out of the water in the middle of nowhere. To many of us this was our first view of the St Kilda group, and the swirling mist made it memorably impressive. The huge seabird colonies, especially the world's largest single colony of Gannets on Boreray and nearby stacks, were just visible and easily audible. Gannets formed a welcoming party, hundreds following *Devonia* as she circled the stacks and squeezed through the narrow gap between Stac Lee and Stac an Armin.

Long after the last Gannet had returned to its ledge we sighted the Flannan Isles and were told the grim story of the mysterious disappearance of three keepers from the lighthouse soon after it was built in 1899. We saw a variety of seabirds on the islets, rocks and stacks, but not the rare Leach's Petrel which nests there. Towards dusk the ship passed a third Gannet colony on the rocky island of Sula Sgeir where the men of Ness from Lewis have an annual expedition to collect young Gannets or 'gugas' for food. James MacGeoch, who has been on several of these expeditions, gave us fascinating accounts of both this and the next island, North Rona, which we approached at dusk. It was still light enough to see some of its grey seals, numbering about 7500 in the breeding season—one seventh of the world population.

By breakfast-time on Tuesday morning we were nearing Shetland; the magnificent 1200 ft cliffs of the Kame of Foula loomed out of the mist, and those who were stationed at the stern of the ship were rewarded with the unusual sight of hundreds of Great Skuas following the wake as we circled the island. Nearly a thousand pairs of these 'Bonxies' now breed on Foula. Cruising up the west coast of Shetland we saw the hump of Ronas Hill, the highest point of these islands, with its forbidding steep and barren cliff slopes; then as we passed the sharp Ramna Stacks, lying off the north tip of Mainland, James Fisher ordered all binoculars to be trained on the largest, where for several years he has been eagerly awaiting proof of nesting by the small group of Gannets which has been frequenting them. Alas, he will have to wait at least another year. By the time we reached Hermaness, its wonderful seabird cliffs were completely shrouded in thick mist; even the top of Muckle Flugga lighthouse was



invisible. It was the same when we rounded the Noup of Noss, where we could hear and smell the Gannets, Kittiwakes and Guillemots but could not see them. At 8 p.m., as we dropped anchor in the fog, three of us and the First Officer prepared to be lowered in one of the ship's boats from the davits high up on C Deck. Shortly afterwards we departed into the mist to reconnoitre the Noss shore for the proposed landing of 250 passengers next morning. This feat, never before attempted from the *Devonia* or *Dunera*, depended entirely upon the weather and the efficiency of a landing stage built by Tom Moncrieff of the Bressay Ferry Services. Both of these were unknown quantities throughout the months of planning, but were risks that in the end proved well worth taking.

A floating platform of planks and barrels, roped to the shore, greeted our advance party on Tuesday evening. After many soundings the crew was satisfied that the landing would be possible. Meantime our guide to Noss had come out to *Devonia* from Lerwick with the Lord Lieutenant, the Editor of the Shetland Times, and a group of musicians to welcome the ship to Shetland and entertain passengers as she sailed towards Bressay Sound. The Noss survey party followed later, guided by the Bressay foghorn and consuming cheese sandwiches, whisky and coffee.

Next morning over 600 passengers disembarked at Lerwick, where they had a chance to explore its shops, the new museum (under the direction of Tom Henderson) and the

nearby Clickhimin Broch. Both in the morning and afternoon a fleet of buses took off for a tour of the south Mainland, which included a visit to Jarlshof and a view of crofting townships, land reclamation schemes, peat cuttings, Mousa Broch, and the Lochs of Spiggie and Brow. Some of our visitors were lucky enough to see Red-necked Phalaropes. While all this was going on, *Devonia* had gone across to Noss and in ideal calm and sunny weather the ship's crew and boats had carried out a most efficient transfer of 250 passengers onto its beach via Tom Moncrieff's landing stage. Even Captain Downer dared to come ashore, but went back to his ship in time to sound the signal to remind stragglers to return to the boats by 2 p.m. Everyone had a good view of the seabird colonies on the Noup of Noss, and the Great and Arctic Skuas on the moorland; some saw Red-throated Divers on the hill lochan. Stage by stage in the afternoon the Noss and Lerwick passengers were safely returned to ship and *Devonia* lifted anchor at 5.30 p.m. for the next leg of her voyage. By the time we had finished dinner she was circumnavigating Fair Isle, where the islanders were out to welcome us with flares at the South End. Later, beside a magnificent bonfire near the bird observatory, Roy Dennis and visiting birdwatchers waved from the cliff edge and received a message of thanks from George Waterston over the Tannoy.

Thursday dawned another sunny day for our visit to Orkney, but a stiff breeze and our distance from Kirkwall made the journey in the ship's boats rather wet and bumpy. Buses from all corners of Orkney carried 450 people on a tour of Mainland in the morning and another 450 in the afternoon. Despite the shortage of time and the inevitable difficulties of narrow lanes, nearly everyone had a chance to see some of the prehistoric sites of Orkney—the Standing Stones of Stenness, Ring of Brogar and Skara Brae; also Puffins, Kittiwakes and Guillemots on the cliffs of Marwick Head, and Pochard on the Loch of Skaill. Orkney's R.S.P.B. Warden, Eddie Balfour, stopped some of the buses near a Hen Harrier's nest on the moorland edge, and a number of people had excellent views, both of nearly fledged young and of the parent birds in flight. As in Shetland, the croft fields and hillsides were bright with flowers. In Kirkwall many of our passengers took advantage of the guided tours of St Magnus Cathedral, arranged by the Custodian, and also saw the remains of the sixteenth-century Bishop's Palace and Earl's Palace. The return trip to the *Devonia* was if anything wetter and windier than in the morning, and many rushed at once to seek internal central heating in the bar.

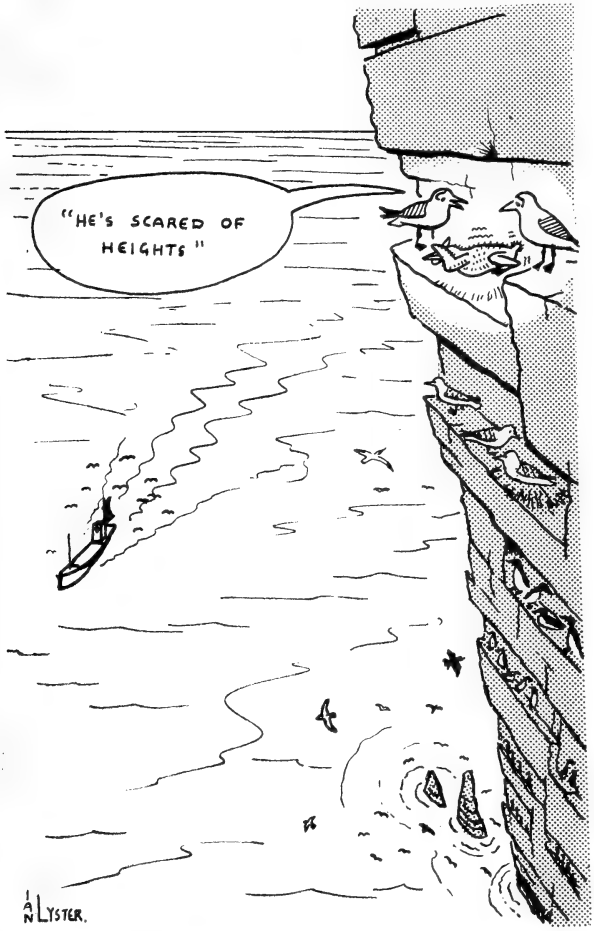
As the final day of the cruise dawned we were approaching the Bell Rock in thick mist, which began to lift as we reached the Isle of May, where Joe Eggeling gave us a lively account

of the island's history and birds, and we were greeted by the lighthouse keepers and the occupants of the bird observatory. Then, in brilliant sunshine, the Bass Rock, teeming with Gannets, loomed ahead, and now we had seen the six main Gannet colonies of Scotland. After passing the Forth islands —Craigleith, the Lamb, Fidra, Inchkeith, Inchmickery—with their varied seabirds (especially terns, Shags and Puffins), we sailed under the the two Forth Bridges—the *Devonia's* mast seeming to clear the centre spans by only a few millimetres, and slowly turned around to make for Leith. At this point all passengers were mustered on the foredeck and Joe Eggeling gave votes of thanks to all the organisers and helpers, the ship's Captain and crew, and the lecturers, commentators and translators, each of whom in turn took a bow from the bridge. Thanks on behalf of the delegates and passengers were expressed by Roger Tory Peterson, Jean Delacour and Karel Voous in American, French, Dutch and German.

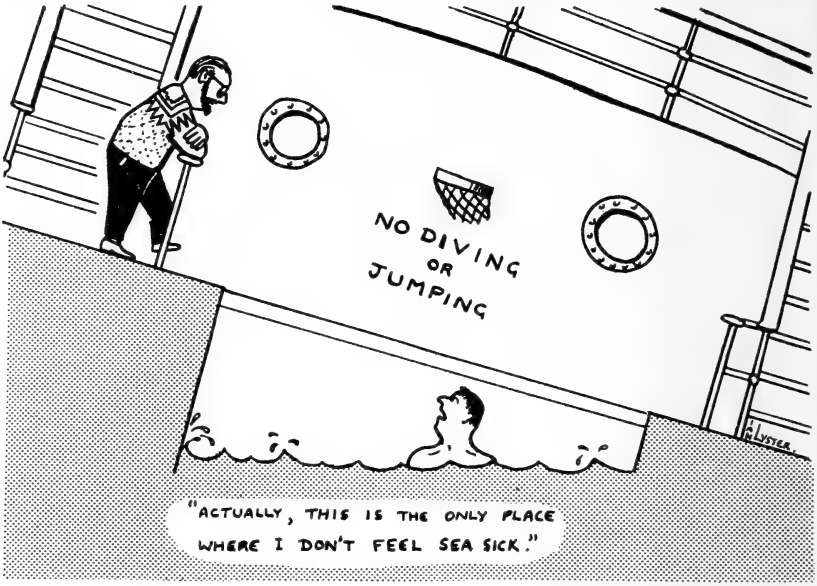
Nearly at the end of the cruise, but before disembarking at Leith, a word about the ship itself. The m.s. *Devonia* (12,796 tons), now run as an educational cruise ship by the British India Steam Navigation Company, was built on the Clyde in 1938 as a troop ship, and it was not until 1962 that she was converted to take 200 cabin and 834 dormitory passengers, with 300 officers and ratings. It was Captain F. A. J. Downer's last voyage in *Devonia*—throughout the cruise he was most kind and helpful to everyone and very tolerant of the increasing number of commentators cluttering the space on his bridge. The Asian crew, mainly from northeast India, are usually employed for 6-month periods; it was noted that at times their cheerfulness exceeded their skill in tying knots!

The organisation on board *Devonia* was a result of careful planning beforehand, and efficient execution by willing helpers. As James Fisher remarked: "What impressed me more than anything else was the complete unselfishness and cooperation of all members of the S.O.C. in establishing such a splendid atmosphere of friendliness on board." Many of the domestic arrangements were planned on the model of the National Trust for Scotland's Adventure Cruises, and a great deal of thought had to be given to the timing of meals, lectures and commentaries. Nearly every day there was a staff meeting to decide the details of the next day's programme, when to sell excursion tickets, when to fit in a repeat of a popular film, how to speed up meal queues, when to open the bookshop, and so on. Each evening, the next day's programme had to be stencilled for issue to all passengers.

A typical day in the life of a dormitory passenger began with 'lights on' at 7 a.m. and the muted strains of Tchaikov-



sky or of Sibelius's *Finlandia* floating over the Tannoy. Some of the taller passengers were quite glad to get out of bed in the mornings because of the slightly cramped conditions and the proximity of their neighbour's feet or face, otherwise all were comfortable. In fact several cabin passengers were heard to complain that they were missing all the fun by not being in a dormitory. It is hoped that James Fisher will publish his survey of the different greeting habits of husbands and wives emerging from their separate dormitories each morning. The meal system was a study in itself—the dormitory passengers had to be divided into four sittings for each meal in the cafetaria, so were issued with grey, red, yellow and pink cards, each colour called to the meal (in a



different order each day) by the Tannoy, with S.O.C. helpers marshalling the queue at each meal. Considering the numbers catered for, the meals were good and very substantial, the courses neatly fitted into the compartments of a metal tray, served by a row of cheery Indian crew all talking like Peter Sellers. Packed lunches were equally large (I was still consuming accumulated Kit-Kat, apples and biscuits several days after the cruise) and were efficiently handed over at the head of each gangway as the passengers climbed down to the ship's boats.

Of the other facilities on board, one of the most popular was surely the bar, where some distinguished ornithologists found their true habitat, and were seldom seen to migrate to other parts of the ship. The swimming pool—only a few cubic feet of it—proved very popular after the first brave venturer had established the fact that the water was not near freezing but nearer boiling point (in fact its temperature rose by some accounts to near 100°F). At times a number of eminent ornithologists and others could be seen wallowing or playing a sort of water polo therein, providing an alternative spectacle to diving Gannets or Bonxies. Some disappointment was registered when the pool was suddenly emptied at odd times of day (or night).

It took time to discover secluded spots and good vantage points on board; the stern deck and rails proved ideal for watching and photographing wheeling birds following the

ship; the bows were good for watching the sea; the foredeck plethora of ropes, funnels and pipes, for seeing over people's heads; the bridge for watching other people watching the bridge; the bar for observing the true character of ornithologists; and the cruise office for watching an endless sequence of heads in small square holes.

To turn to the more serious aspects of the cruise: apart from sleeping, eating, drinking, swimming, sunbathing, shopping, watching birds, listening to commentaries and going on excursions, there was a full programme of lectures and films, all of which were very well attended, and covered just about every aspect of the life of the Scottish highlands and islands, and many other topics further afield. Nearly all the speakers had to repeat their lectures (in the large assembly hall and smaller lecture rooms), and the halls were compulsorily emptied after each talk, to overcome the tendency of passengers to stay (or sleep?) in the same seat throughout an evening.

Most popular were the first two lectures on Saturday evening—Joe Eggeling on "The Isle of Rhum" and Charles Waterston on "Coastal Scenery of Scotland." On other days we heard Ian Pennie on "A 17th Century Doctor's Island Travels," Chris Mylne on "Foula," Sandy Fenton on "Daily Life in Orkney and Shetland" and "Scottish Country Life," Charles Waterston again, on "Prehistoric Sites in Orkney and Shetland," Joe Eggeling again, on "Conservation in Scotland," George Waterston on "Fair Isle," David Lea on "Conservation and Wildlife Reserves" and Ronald Miller on "The Geographical Background." The bird films were all very popular; they included James MacGeoch's "Sula Sgeir Gannets," Bryan Nelson's "Gannet City," Eastman's "Private Life of the Kingfisher" and the R.S.P.B.'s "Birds of Strathspey." More-general films about wildlife and conservation were "Journey into Spring," "The Last Stronghold," "The Grey Seals of North Rona" (James MacGeoch), "Island Hills" and "A Summer Safari" (Gordon Hollands), "The Wild Highlands," "The Vanishing Coast" and, standing out among all these, Roger Tory Peterson's "Wild Europe." A number of very Scottish, non-ornithological films occupied the late-night viewing time—"The Maggie," "Whisky Galore," "Laxdale Hall," "Greyfriars Bobby," and "Geordie." Added to this were two sessions of Any Questions, and a Brains Trust held in the cafeteria, which found great difficulty in retaining an atmosphere of serious discussion, lapsing frequently into unseemly frivolity.

Tireless S.O.C. staff and helpers manned the Cruise Office nearly all day long, and the bookshop for many hours each day. The shop did a roaring trade in postcards and sold a

large number of books. Quite a number of the authors were on board, and it is not surprising that Peterson's European *Field Guide* was a best-seller, followed closely by Scottish books on St Kilda, Fair Isle, Orkney and Shetland, and the Highlands and Islands. In all, books to the value of about £1000 were sold and many orders received, thus helping considerably the Club's finances. The bookshop staff, Ruby and Jim Smillie, Cathie MacGeoch and Evelyn Fenton, also managed to ensnare and enroll nearly 50 new members for the S.O.C. Next door the R.S.P.B., B.T.O., Nature Conservancy, National Trust for Scotland, Seabird Group, and Royal Naval Birdwatching Society had exhibits and sold their wares or spread their gospel.

Stationed for much of the time in the bookshop was the President of the S.O.C., in plain clothes, ostensibly getting people to sign an album as a memento of the cruise, but surreptitiously gathering donations from passengers. Dr Pough of the U.S.A. was involved in a similar activity, and the word spread like wildfire that there would be a presentation to Irene and George Waterston after the cruise of a pair of Leitz Trinovid binoculars each, with the surplus going to the "Waterston Exploration Fund." This took place just before the final dinner in the Assembly Rooms and was apparently quite unexpected by the recipients—a much deserved reward for all their hard work.

The end of the cruise came with our arrival in Leith on Friday evening. Many passengers left, much unloading was done, but the Congress delegates did not disembark until 7 a.m. on Saturday (all except one passenger who was found fast asleep in one of the dormitories by the cruise leader doing the rounds to collect lost property). The rest of the lost property contained some quite amusing items, some of which have still to be claimed. Has no one yet missed their dressing gown (man's), or a pair of wellingtons in a shopping bag?

Whilst we were enjoying ourselves on board *Devonia*, Tom Delaney, Peter Slater and helpers were preparing in Edinburgh for the invasion of delegates. The Assembly Rooms were decorated with exhibitions of paintings and photographs; binoculars and cameras were on display; and there were exhibits from the Glasgow Museum and Aberdeen University. Excursions round the city, to Duddingston, the Zoo and the Museum had been organised, and several small groups were taken to the border hills to see Red Grouse. In the late afternoon a programme of dancing and singing by members of the Royal Scottish Country Dance Society and the Silver Cross Club was followed by dinner in the Assembly Rooms. There was then a mass migration to the University's magnificent Upper Library (with Audubon's *Birds of America* on display) for an official reception by Professor Michael Swann, at which the Senior Past President of the I.O.C., Dr Stresemann, gave a vote of thanks on behalf of delegates, just before they all left for Waverley Station and the trains to Oxford. Dr Ian Pennie, President of the Scottish Ornithologists' Club, was Master of Ceremonies throughout the whole of Edinburgh Day.

The passenger list of the cruise included many of the world's leading ornithologists; it was certainly the first time that so many had been brought together in such circumstances. No more than a few have been mentioned here, but what a volume could be compiled from the many anecdotes

and photographs—both of birds and of people. Some cartoons that appeared from time to time, and a few photographs, are reproduced to illustrate this account of the cruise. It is hoped that they convey something of the atmosphere of this memorable occasion. Unfortunately it has seemed kindest to the victims to suppress all the funniest stories and most remarkable 'quotes,' but everyone who took part in the cruise will have his own memories to add between the lines.

Of the 905 passengers, 392 were conference delegates—about 400 were from overseas from 37 countries. Every country in Europe was represented, including Bulgaria, Rumania, Hungary and Czechoslovakia. There were about 200 visitors from America, and others from India, Venezuela, Chile, Egypt, Israel, Bermuda, Hong Kong, Japan, South Africa, New Zealand and Australia.

There could be no finer tribute to the success of the cruise, nor greater reward for all who worked so hard to achieve it, than the pleasure it gave to so many people.

Review of ornithological changes in Scotland in 1965

DOUGAL G. ANDREW

Introduction

This is the thirteenth report of the Scottish Bird Records Committee, and it is concerned with records *published* during 1965. The periodicals searched, with the abbreviations used in this report, are as follows:

SB	*Scottish Birds*, Vol. 3: 217-454
BB	*British Birds*, Vol. 58
	Bird Study, Vol. 12
FIBOR	*Fair Isle Bird Observatory Report*, 1964
BN	*Bird Notes*, Vol. 31: 213-404
	Ibis, Vol. 107
Bull BOC	*Bulletin of the British Ornithologists' Club*. Vol. 85
	Sixteenth Annual Report of the Wildfowl Trust, 1963-64
ENHS	*Edinburgh Natural History Society News-Letter*, 1965

Reference will also be found to *A Check-List of the Birds of Ayrshire* (*B Ayr*) by G. A. Richards—an unpublished duplicated typescript of which a copy has been placed in the S.O.C. Library (reviewed *SB* 3: 434). Abbreviations are also used for the following works:

BofS	*Birds of Scotland*, 1953

GDSBS *Geographical Distribution and Status of Birds in Scotland*, 1928
ASNH *Annals of Scottish Natural History*, 1892-1911
SN *Scottish Naturalist*, 1871-1964
FIBOB *Fair Isle Bird Observatory Bulletin*, 1951-

There have been no changes in the composition of the Committee. The members are listed in our last report (*SB* 3: 390), which also lists references to previous reports.

Birds new to Scotland

[Ruddy Duck *Oxyura jamaicensis*. Drake seen, Kilconquhar Loch, Fife, 20th June to end July 1965 (*SB* 3: 422). This North American species is commonly kept in captivity, and fair numbers are now breeding in a feral condition in England: it must be assumed that all birds occurring in Scotland are of captive origin unless there is positive evidence to the contrary.]

Birds new to areas and counties

Red-throated Diver *Gavia stellata*. One found dead, Portmore Loch, 7th March 1965 (*SB* 3: 367); first for Peebles.

Black-necked Grebe *Podiceps nigricollis*. One found shot, Reay, 29th January 1964 (*SB* 3: 267); first for North Coast and Caithness. One, Kilmory, Rhum, 15th March 1960 (*SB* 3: 377); first for Inner Hebrides. One, Loch Mhor, 29th July 1965 (*SB* 3: 422); first for East Inverness (an earlier reference to an occurrence in this division (*SN* 1933: 74) appears to be based on a record from Loch Lochy (*SN* 1932: 168) and this locality is in South Inverness).

Manx Shearwater *Procellaria puffinus puffinus*. One flying up the Beauly River near Beauly, 27th August 1965 (*SB* 3: 422); first for East Inverness.

Purple Heron *Ardea purpurea*. One, Fair Isle, 17th-22nd June 1965 (*BB* 58: 391; *SB* 4: 81); this (the fifth Scottish record and the first since 1917) is the first for Shetland faunal area and Fair Isle.

White Stork *Ciconia ciconia*. One, near Innerwick, 16th-17th March 1965 (*SB* 3: 406); first for East Lothian and also the first for Forth apart from the pair that nested on St Giles Cathedral, Edinburgh, in 1416 (*BofS*: 333). The possibility that this bird had escaped from captivity cannot be ruled out.

Spoonbill *Platalea leucorodia*. Immature, near Crieff, 16th July 1964 (*SB* 3: 310); first for Tay and North Perth. One, Isle of May, 16th September 1964 (*SB* 3: 285); first for Isle of May. Immature, mouth of Findhorn, 19th October 1964 (*SB* 3: 310); first for Moray Basin and Moray (not

Nairn as has been stated—*BB* 58: 32).

GREEN-WINGED TEAL *Anas crecca carolinensis*. Drake, Barr Loch, 10th-19th April 1965 (*SB* 3: 408); first for Clyde and Renfrew.

RED-CRESTED POCHARD *Netta rufina*. Female, Loch Mahaick, 19th September 1965 (*SB* 3: 422); first for South Perth, though the possibility that this bird had escaped from captivity cannot be ruled out.

LONG-TAILED DUCK *Clangula hyemalis*. Drake, Gartmorn Dam, 8th May 1965 (*SB* 3: 422); first for Clackmannan.

SURF SCOTER *Melanitta perspicillata*. Drake off Moray coast (the locality was off Findhorn), 14th October 1964 (*SB* 3: 252); first for Moray Basin and Moray. Drake, Luce Bay, 23rd February 1965 (*SB* 3: 364); first for Wigtown.

HARLEQUIN DUCK *Histrionicus histrionicus*. Pair, Fair Isle, 11th January-2nd February 1965 (*BB* 58: 352; *SB* 4: 83); first for Shetland faunal area and Fair Isle. Pair, near Wick, 18th April-1st May 1965 (*BB* 58: 352; *SB* 4: 84); first for North Coast and Caithness. It seems likely that these records both refer to the same two birds.

PINK-FOOTED GOOSE *Anser arvensis brachyrhynchus*. One, Hunterston, 26th November 1957 (*B Ayr*: 10); first for Ayr. We can find no published record to support the description of the species as "Occasional" in this county (*GDSBS*: 230), and Paton & Pike in their *Birds of Ayrshire* (1929) give no record for the county.

BARNACLE GOOSE *Branta leucopsis*. One, Baddinsgill, 8th November 1964 (*SB* 3: 263); first for Peebles. Two out of three shot (one had been ringed in Spitsbergen in July 1963), Bowhouse, Alloa, 4th January 1965 (*SB* 3: 320); first for Clackmannan.

CANADA GOOSE *Branta canadensis*. Fifteen near Devonmouth, 18th June 1965 (*SB* 3: 423); first for Clackmannan.

BUZZARD *Buteo buteo*. The 1956 breeding record (see under "First breeding records" below) also provides the first occurrence for Clackmannan, antedating an October 1962 record accepted in an earlier report (*SB* 3: 171) as the first for the county.

ROUGH-LEGGED BUZZARD *Buteo lagopus*. One, Durness, 18th September 1965 (*SB* 3: 423); first for North Sutherland.

MARSH HARRIER *Circus aeruginosus*. Adult or near-adult, Tarriefessock, 31st May 1952 (*B Ayr*: 13); first for Ayr. Adult female, Loch Sween, 18th May 1964 (*SB* 3: 268); first for Argyll faunal area and North Argyll.

OSPREY *Pandion haliaetus*. One, St Kilda, 29th March 1965 (*SB* 3: 369); first for St Kilda.

Hobby *Falco subbuteo*. Male found dead, Stornoway woods, 9th May 1965 (*SB* 3: 369); first for Outer Hebrides faunal area.

Quail *Coturnix coturnix*. One calling, Thornhill, early August 1965 (*SB* 3: 424, corrected *SB* 4: 116); first for South Perth.

Little Bustard *Otis tetrax*. Male, Kidsdale Farm, Luce Bay, 29th April 1964 (*SB* 3: 253); first for Solway and Wigtown.

Long-billed or Short-billed Dowitcher *Limnodromus scolopaceus* or *griseus*. One, West Ardmore Bay, 15th August 1964 (*SB* 3: 255); first for Dunbarton.

Black-tailed Godwit *Limosa limosa*. One, Loch Fleet, 22nd July 1965 (*SB* 3: 424); first for South East Sutherland.

Wood Sandpiper *Tringa glareola*. One, New Cumnock, 5th September 1965 (*SB* 3: 425); first for Ayr.

Spotted Redshank *Tringa erythropus*. One, Tarradale, 31st August 1965 (*SB* 3: 425); first for East Ross.

Red-necked Phalarope *Phalaropus lobatus*. One, Clerklands Loch, 29th October-8th November 1964 (*SB* 3: 430); first for Roxburgh.

Black Tern *Chlidonias niger*. One, Gartmorn Dam, 12th September 1965 (*SB* 3: 427); first for Clackmannan.

Collared Dove *Streptopelia decaocto*. First appeared at Bo'ness about 1960 (*SB* 3: 295); first for West Lothian. First appeared at Banff in 1960 or 1961 (*SB* 3: 296); first for Banff. Two first seen at Inverbervie in 1961 (*SB* 3: 296); this antedates and replaces the 1963 record from Dunottar Castle accepted in an earlier report (*SB* 3: 173) as the first for North Kincardine. The 1962 breeding record at Arbroath (see under "First breeding records" below) is also the first occurrence for Angus. Two, Cambuslang, March 1963 (probably some months earlier) (*SB* 3: 298); this antedates and replaces the September 1963 record from the same locality accepted in an earlier report (*SB* 3: 173) as the first for Lanarkshire. One, Killearn, 23rd April 1963 (*SB* 3: 298); first for West Stirling. One, Munches, Dalbeattie, 27th May 1963 (*SB* 3: 298); first for Kirkcudbright. Two, Clattering Brig, June 1963 (*SB* 3: 296); first for South Kincardine. One, Elphin, early in June 1963 (*SB* 3: 299); first for North West Highlands and West Sutherland. Pair, Upper Duntuilm, throughout summer 1963 (*SB* 3: 299); first for Skye. Two, Iona, August 1963 (*SB* 3: 299); first for North Argyll. One, Shieldaig, about second week March 1964 (*SB* 3: 299); first for West Ross. One, Dornoch, 27th April 1964 (*SB* 3: 297); first for South East Sutherland. One, Kilcreggan, 14th May 1964 (*SB* 3: 299); first for Dunbarton. Single birds at Berriedale, Lybster and Thurso

and pair at Wick, all in May 1964 (*SB* 3: 297); first for North Coast and Caithness. One, Aird Torrisdale, 10th June 1964 (*SB* 3: 297); first for North Sutherland. One, Macharioch House, June 1964 (*SB* 3: 299); first for South Argyll. Two, Dollar, 4th August 1964 (*SB* 3: 295); first for Clackmannan.

Alpine Swift *Apus melba*. One caught, North Ronaldsay, 8th June 1965 (*SB* 3: 418); first for Orkney.

Hoopoe *Upupa epops*. One, Eigg, 18th-26th May 1965 (*SB* 3: 373); first for Inner Hebrides.

Green Woodpecker *Picus viridis*. Pair has been present in central Ayrshire since 1961; nest-holes have been bored but breeding has not yet been proved (*B Ayr*: 29); first for Ayr. An earlier record of one heard calling by the Girvan Water on 19th July 1925 was subsequently placed in square brackets by the observer, E. R. Paton, in his *Birds of Ayrshire*: 93. One, Walkerburn, 30th March 1965 (*SB* 3: 322); this is the first published record for Peebles, but in fact records go back to 1953 when a pair was seen at Traquair (T. MacLaren per George Waterston) and a pair probably bred in Plora Wood near Walkerburn in 1961 and 1962 (J. Ballantyne). One near Alva, 16th April 1965 (*SB* 3: 373); first for Clackmannan.

Golden Oriole *Oriolus oriolus*. Male, Iona, 27th May 1965 (*SB* 3: 374); first for Argyll faunal area and North Argyll. Male, Carloway, Lewis, 29th May 1965 (*SB* 3: 374); first for Outer Hebrides faunal area.

Chough *Pyrrhocorax pyrrhocorax*. One, Stroma, May 1965 (*SB* 3: 374); first for Caithness.

Coal Tit *Parus ater*. Two, Stornoway Castle woods, 2nd April 1965 (*SB* 3: 374); first for Outer Hebrides since July 1906, when several family parties were seen in the same locality and the species was evidently breeding (*ASNH* 1907: 19). Two, Whalsay, 29th September 1965 (*SB* 3: 430); first for Shetland other than Fair Isle.

Dipper *Cinclus cinclus*. One showing the characteristics of the black-bellied continental race, *C. c. cinclus*, North Ronaldsay, 4th April 1965 (*SB* 3: 374); first record of this race for Orkney. Dippers have not bred in Orkney since the mid 1940s. This bird was therefore certainly a migrant and it seems reasonable to discount the possibility of its having been an abnormally-plumaged bird of British stock (see *SB* 1: 336).

Greenland Wheatear *Oenanthe oenanthe leucorrhoa*. At least one trapped and a few present on Island Roan during the period 26th August/20th September 1963 (*SB* 3: 405); first identification of this race for North Sutherland.

GRASSHOPPER WARBLER *Locustella naevia*. One, St Kilda, 1st May 1965 (*SB* 3: 375); first for Outer Hebrides faunal area and St Kilda.

GREAT REED WARBLER *Acrocephalus arundinaceus*. One heard singing and seen, East Inverness, 8th-20th June 1964 (*SB* 3: 315); first for Moray Basin and East Inverness. It is also the first record for the Scottish mainland and has the unusual distinction of being the second-equal Scottish record—another bird having been trapped on Fair Isle on the same date (*FIBOR* 1964: 18).

[AQUATIC WARBLER *Acrocephalus paludicola*. One, North Ronaldsay, Orkney, 3rd May 1965 (*BB* 58: 352); this record was subsequently withdrawn by the observer.]

ICTERINE WARBLER *Hippolais icterina*. A record of a bird which was either this species or a Melodious Warbler *H. polyglotta*, seen at Elie, 8th September 1965 (*SB* 3: 429), has been followed by a definite Icterine Warbler, Fife Ness, 2nd-5th September 1966 (*SB* 4: 323); first for South Fife.

BARRED WARBLER *Sylvia nisoria*. One, Reay, 22nd September 1965 (*SB* 3: 429); first for Caithness.

CHIFFCHAFF *Phylloscopus collybita*. Two singing, Lochinver, 11th June 1964 (*SB* 3: 323); first for West Sutherland. Two, Island Roan, 2nd September 1963 (*SB* 3: 405); first for North Sutherland.

FIRECREST *Regulus ignicapillus*. Male, Seafield, Lerwick, 11th June-3rd July and 29th August-27th September 1965 (*BB* 58: 391; *SB* 4: 99); this, the third Scottish record, is also the first for Shetland faunal area.

PIED FLYCATCHER *Muscicapa hypoleuca*. Male, Kishorn, 12th June 1965 (*SB* 3: 376); first for West Ross.

LESSER GREY SHRIKE *Lanius minor*. One found dead, North Ronaldsay, 30th May 1965 (*SB* 3: 420); this is the first published record for Orkney, but an earlier record has subsequently been published—one, Finstown, 11th November 1962 (*SB* 4: 232).

[BLACK-HEADED BUNTING *Emberïza melanocephala*. Male, Whalsay, Shetland, 1st-5th June 1965 (*BB* 58: 391; *SB* 4: 103); a male Red-headed Bunting *E. bruniceps* was present in the same area at the same time, and it seems very likely that both birds were escapes from captivity.]

RUSTIC BUNTING *Emberiza rustica*. One, South Uist, 7th May 1965 (*BB* 58: 352; *SB* 4: 104); first for Outer Hebrides faunal area.

First breeding records for areas and counties

BLACK-THROATED DIVER *Gavia arctica*. Pair present at one

loch in Ayrshire in 1955 and bred in 1956, hatching two chicks, neither of which survived (*B Ayr*: 1); first breeding for Ayr.

Red-throated Diver *Gavia stellata*. Pair laid two eggs (both subsequently taken) at a loch in Ayrshire in 1957 (*B Ayr*: 1); first breeding for Ayr.

Goosander *Mergus merganser*. Has bred regularly since 1950 at one locality and more recently elsewhere in south Ayrshire (*B Ayr*: 9); first breeding for Ayr.

Grey Lag Goose *Anser anser*. A pair (no doubt from the expanding feral colony in Wigtownshire) bred at a loch in Ayrshire in 1963 and 1964 (*B Ayr*: 10); first breeding for Clyde and Ayr.

Buzzard *Buteo buteo*. Pair at occupied nest, King's Seat Hill, 14th May 1965 (*SB* 3: 410); this is the first published breeding record for Clackmannan, but a much earlier record has subsequently been published—a nest with three eggs near Dollar in May 1956 (*SB* 4: 264).

Hen Harrier *Circus cyaneus*. Pair bred in Ayrshire in 1960, hatching three young (*B. Ayr*: 13); first breeding for Ayr this century.

Oystercatcher *Haematopus ostralegus*. A pair or two breed each year on an island in the Tweed below Rutherford House (*SB* 3: 48); first breeding for Roxburgh.

Curlew *Numenius arquata*. Pair with at least three young found in Lewis, 20th June 1965 (*SB* 3: 370); first breeding for Outer Hebrides faunal area.

Black-tailed Godwit *Limosa limosa*. Pair hatched at least two young at a locality in southern Scotland in June 1964 (*SB* 3: 256); eggs were again laid in the same locality in 1965 (*SB* 3: 424); first breeding for southern Scotland.

Great Skua *Catharacta skua*. Pair bred, Handa, 1964, hatching one chick which was killed shortly before fledging (*SB* 3: 313); first breeding for North West Highlands and West Sutherland.

Great Black-backed Gull *Larus marinus*. Breeding on Craigleith was first suspected in 1963 and proved in 1965 when a single chick was found (*ENHS* 1965: 14); first breeding for East Lothian since the old Bass Rock colony became extinct some time after 1851.

Lesser Black-backed Gull *Larus fuscus*. Pair breeding, near Cove, 28th May 1965 (*SB* 3: 430); first breeding for North Kincardine.

Arctic Tern *Sterna macrura*. Two or three pairs bred (two nests found), Largo Bay, July 1949 (*SB* 3: 313); first breeding for South Fife.

Puffin *Fratercula arctica*. Egg located in one of three bur-

rows on Inchkeith, 1965 (*ENHS* 1965: 14; *SB* 4: 246); first breeding for South Fife.

COLLARED DOVE *Streptopelia decaocto*. One pair nested at Arbroath in spring 1962 (*SB* 3: 296); first breeding for Tay and Angus. Three birds first noticed in Hamilton Place, Perth, in May 1962 and two free-flying young observed there later that summer (*SB* 3: 295); first breeding for North Perth. Now breeding at several localities in East Ross, and breeding is thought to have first taken place at North Kessock, Tarbat and Invergordon in 1962 (*SB* 3: 297); first breeding for East Ross. Several pairs bred at Gullane and Aberlady in 1963 (*SB* 3: 294); first breeding for East Lothian. One pair bred at Stonehaven in 1963 (*SB* 3: 296); first breeding for North Kincardine. In 1964 there were three nests at Garlieston (*SB* 3: 298); first breeding for Wigtown, although breeding had been suspected in 1963 (but not proved as has been implied—*BB* 58: 127). Pair bred at Linlithgow in 1964 (*SB* 3: 295); first breeding for West Lothian, though there is evidence (but not proof as has been implied—*BB* 58: 114) that breeding had taken place at Bo'ness since about 1960. Pair bred at Cambuslang in 1964 (*SB* 3: 298); first breeding for Lanark. Pair bred near Campbeltown in 1964 (*SB* 3: 299); first breeding for South Argyll. Single pairs bred successfully at Dunfermline and Crail in 1964 (*SB* 3: 295); first breeding for South Fife. Pair bred at Inverness in 1964 (*SB* 3: 297); first breeding for East Inverness. Single pairs nested at Wick and Castle Mey in 1964 (*SB* 3: 297); first breeding for North Coast and Caithness. Nest with eggs at Binscarth Wood in 1964 (*SB* 3: 300); first breeding for Orkney. At least three pairs bred at Lerwick in 1965 (*BN* 31: 398); first breeding for Shetland faunal area.

REDWING *Turdus iliacus*. Adult singing, and later adult seen with two recently-fledged young, West Sutherland, 13th June 1964 (*SB* 3: 315); first breeding for North West Highlands and West Sutherland.

GARDEN WARBLER *Sylvia borin*. Pair seen carrying food into thick bushes and scolding intruders, Binscarth Wood, 15th/16th July 1964 (*SB* 3: 268); first breeding for Orkney.

Records carried forward

The following records are carried forward for further consideration:

BAIKAL TEAL *Anas formosa*. Fair Isle, 30th September 1954 (*FIBOB* 2: 194); Loch Spynie, Moray, 5th February 1958 (*Bull BOC* 78: 105).

EASTERN SUBALPINE WARBLER *Sylvia cantillans albistriata*. Fair Isle, 23rd April 1964 (*FIBOR* 1964: 19).

Short Notes

Green-winged Teal and American Wigeon in Inverness-shire

On 30th December 1965 I identified an adult drake American Wigeon swimming with a flock of Wigeon off the south shore of the inner Moray Firth just east of Inverness. I last saw it on 11th February 1966, and in between it had been seen by several other people. It was identical to the one I found in the same area on 17th January 1965 (*Scot. Birds* 3: 360).

After looking at this bird on 5th January 1966 I examined a flock of 400 Teal nearby and found a drake Green-winged Teal swimming with them. It was still there on the 16th, when M. Morrison and I saw it with 340 Teal. This is the same place where I recorded a similar bird with 300-400 Teal between 5th and 22nd February 1963 (*Scot. Birds* 2: 418). It is the seventh Scottish record of this American race of Teal.

Full descriptions have been submitted to the Rarities Committee. These two American ducks are usually associated with their European counterparts when seen in the British Isles. It seems reasonable to assume that the two birds were the same ones previously recorded and had stayed with their respective flocks. The few recoveries of ducks which I have ringed at Inverness suggest that Teal and Wigeon wintering in this area migrate northeast in spring to breed in northern Europe and Russia. As it is feasible that these two American strays might interbreed with European Teal and Wigeon it will be worth looking for hybrids in future winters at Inverness.

ROY H. DENNIS.

Surf Scoter in Kirkcudbrightshire

A drake Surf Scoter was reported from Southerness on 27th December 1965. This is the same place where a drake was seen on 1st January 1964 (*Scot. Birds* 3: 195) and from 13th February to 14th March 1965 (*Scot. Birds* 3: 362).

We went to Southerness on 1st January 1966 and eventually located the bird when it flew in from the west with several Common Scoter. It settled with them and started feeding. Even at extreme range it was relatively easy to pick out, though the light shining on the backs of the heads of Common Scoter could be confusing at certain angles.

Full notes were made and have been submitted to the Rarities Committee. On both 1st and 2nd January, when we saw the drake again, we thought that there was a female present as well, but we were not able to establish this with

certainty and most subsequent observers noted only the drake. It was seen later by W. Austin, Miss P. G. Baxter, D. G. Bell and many others and stayed in the area until at least 27th February, when it was seen by A. D. K. Ramsay.

ANDREW PATERSON, D. I. REDHEAD.

King Eider in Shetland

Ferrymen crossing from Scalloway on the Shetland Mainland to Hamnavoe in Burra Isle reported seeing a duck with an orange lump on its forehead among Eiders on 19th, 20th and 21st April 1966. A gale was blowing on the 22nd and I declined an opportunity to look for the bird, as the Eiders tend to move further from the land in rough seas.

On the 23rd it was calm and bright. I left Scalloway by boat and found the bird with about 200 Eiders near the Atla Holm, a low rocky skerry off Hamnavoe. It was a male King Eider, conspicuous with the large orange knob on its forehead. The raft of Eiders swam out to sea and we followed and had excellent views of the King Eider. As we tried to get closer the flock broke in two, leaving the King Eider between them. I hurriedly took some photographs before it flew off into the distance.

Apart from the orange knob, the head was very noticeable, for the velvety grey (rather like the wing of a Common Gull) contrasted sharply with the black crowns of the male Eiders; the cheeks were green; the eyes seemed thickly set in the large angular head, which looked very wide from behind. Comparing this bird with the *Field Guide* illustration I noted that the head was slightly less blue, longer from front to back, and highest at the back, with a bigger orange shield protruding further forward. The bird seemed scarcely smaller than an Eider, although one I saw in October 1964 (*Scot. Birds* 3: 311) had been noticeably smaller. The white line on the wings did not show when it was at rest.

It rose from the water with almost the ease of a surface feeder, unlike the laborious flapping of an Eider. The black on the back was obvious now, with the white wing patches showing a narrow black line on the fore-edge.

The bird was seen again in the same area on 26th and 29th April, and after a gap it reappeared in Lang Sound, Burra Isle, on 10th, 17th and 20th June.

DENNIS COUTTS.

Black Kite in Orkney and Shetland

On 18th May 1966 a pair of Hen Harriers which I was watching in the Lyde area of Harray were joined by a Black Kite. It had a much greater wingspan than the harriers and a slightly forked tail. The flight was graceful and

buoyant and it used its flexible tail a lot. I had it under observation for well over an hour that day and again the following morning.

E. Balfour.

A Black Kite was first seen about noon on 27th May 1966 being mobbed by gulls near Sumburgh Airport. Subsequently it was seen throughout Dunrossness in the south of Shetland. It remained in the area until 2nd June and was seen by many people and successfully photographed by Dennis Coutts, both in the air and at bait put out at the airport.

G. D. Joy, M. Carins.

(Detailed descriptions have been supplied for both these records, and very extensive field notes on the Shetland occurrences. Full details of these records and of others in England about the same time will be published in *British Birds* together with photographs taken in Shetland.

Although the Black Kite is a summer visitor to many parts of its range and breeds regularly as near as northern Germany, there is only one previous Scottish record—a male which was shot near Aberdeen in mid April 1901 (*Ann. Scot. Nat. Hist.* 1901: 133). There has been no acceptable British record since a bird was obtained in Northumberland on 14th May 1947 (*Brit. Birds* 40: 251).—Ed.)

Stone Curlew in Lanarkshire

On 21st April 1966 on a visit to Scotland my wife and I had good views of a Stone Curlew near Abington. I am familiar with this species, having seen it in East Anglia and in Sussex. It was standing motionless and upright on barren pasture—stony ground with weeds and low scrub—and we watched it for about two minutes before it scuttled away, head down, and disappeared over a rise. It was not seen in flight and no call was heard. I made the following field description of the bird:

> Large long-legged bird with smallish rounded head; prominent staring yellow eye with white stripe below; upperparts sandy brown, streaked darker brown; crown appeared darker brown; white band clearly visible on closed wing; chin, throat and belly white; breast and flanks streaked light brown; bill short and yellow with black tip; legs long and yellow.

Sidney Kent.

(This is the tenth Scottish record and the first for Lanarkshire; it is also the earliest in spring by two days.—Ed.)

PLATE 28. Dr W. J. Eggeling, leader of ihe Scottish Bird-Islands Study Cruise, 16th-22nd July 1966.

Photograph by J. MacGeoch

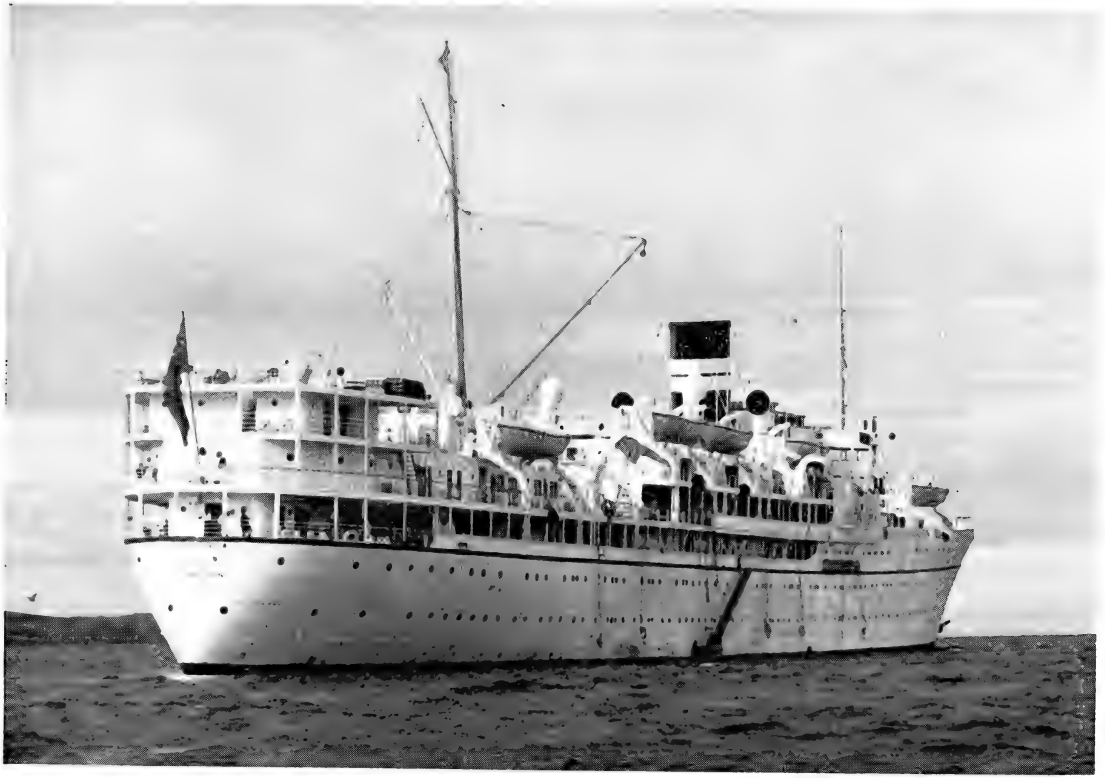


PLATE 29. The cruise ship m.s. *Devonia*, 12,796 tons, built on the Clyde in 1938 and converted in 1962 to carry over 1000 passengers and a crew of 300.

Photograph by J. MacGeoch

PLATE 30. Embarking at Greenock. In little more than an hour 900 passengers were shepherded on board and consuming coffee.
Photograph by J. MacGeoch

PLATE 31. Commentaries from the bridge were listened to with great attention and mention of any interesting species brought passengers crowding to the rails with a variety of optical equipment.

Photograph by C. K. Mylne

PLATE 32. The Bass Rock, sixth of the Scottish Gannet colonies visited, was seen in glorious sunshine. The Gannet *Sula bassana* takes its name from this island. *Photograph by C. K. Mylne*

PLATE 33. James Fisher, Roger Tory Peterson and George Waterston (*left to right*) were among those whose expert commentaries and lectures contributed to the understanding and enjoyment of passengers on the cruise.
Photograph by J. MacGeoch

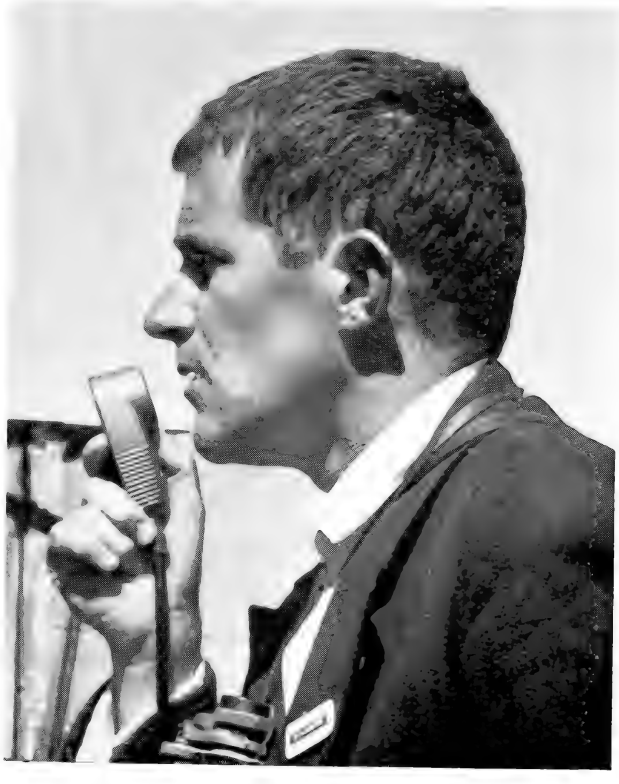


PLATE 34. Walter Thiede (*left*) and Raymond Lévêque gallantly undertook translations of nearly all the commentaries into German and French respectively.
Photographs by J. MacGeoch

PLATE 35. C. K. Mylne with the much photographed lone Indian officer on the ship. The cheerful Asian crew came mainly from northeast India.

Photograph by J. MacGeoch

PLATE 36. Irene Waterston, Secretary of the Scottish Ornithologists' Club and responsible for the detailed planning and administration of the cruise. Taken on Noss.

Photograph by J. MacGeoch

PLATE 37a. Passengers going ashore on Noss from *Devonia's* launches over a floating landing stage specially prepared for the day by Bressay Ferry Services of Shetland. More than 250 people were able to land on Noss.

Photograph by C. K. Mylne

PLATE 37b. Buses from all corners of Orkney were called in to take 450 people in the morning and another 450 in the afternoon on a tour of the local bird haunts and prehistoric sites.

Photograph by J. MacGeoch

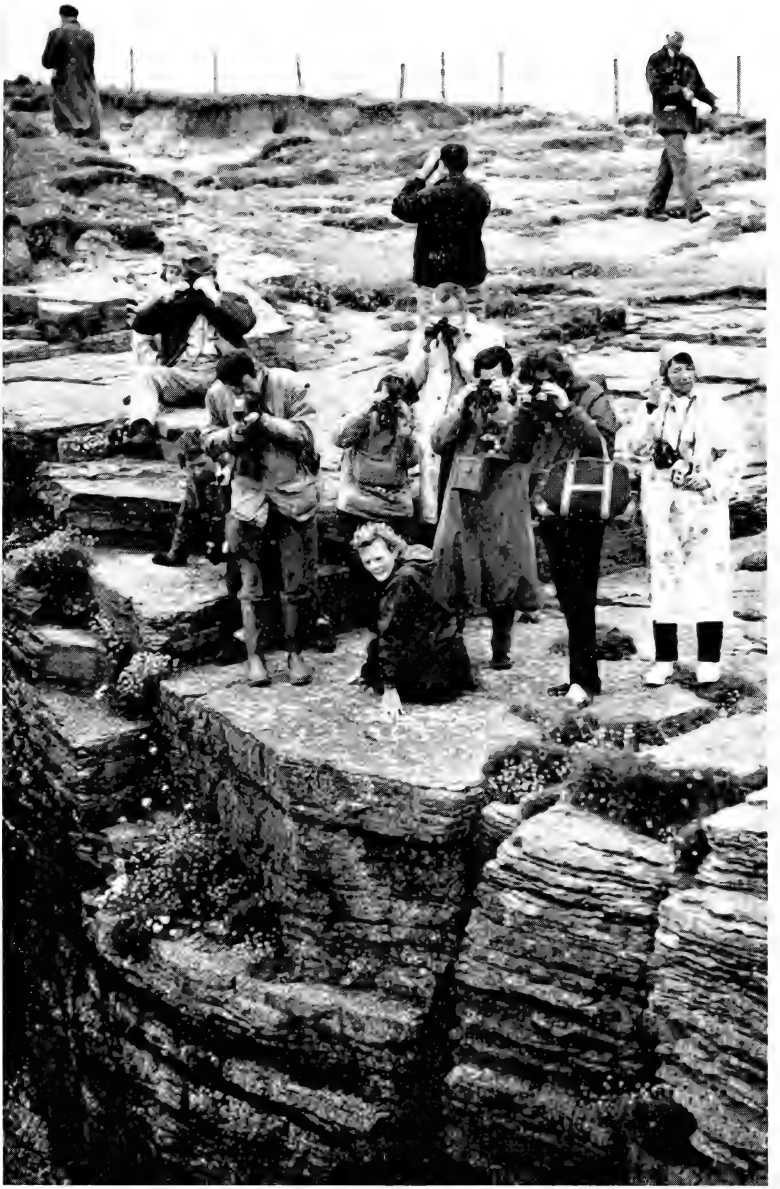


PLATE 38. An assortment of cameras and binoculars at Marwick Head, Orkney. For many people the great colonies of cliff-nesting seabirds were a new experience and an exciting highlight of the cruise.

Photograph by J. MacGeoch

PLATE 39. The best part of 900 passengers gathered on the foredeck, and elsewhere, for speeches of thanks in English, French, German and Dutch as the ship sailed up the Forth to berth at Leith.

Photograph by Nancy J. Gordon

The Collared Dove in Scotland—some first records

All known records of the Collared Dove in Scotland to the end of 1964 were listed recently (*Scot. Birds* 3: 292-301). It is too soon for a further paper on these lines, but a lot of new records have been gathered and it seems worth keeping local lists up to date by publishing details of first occurrences and breeding records for particular faunal divisions.

Kinross. Two at Milnathort on 10th May 1966 are the first for the county (Miss V. M. Thom).

Southeast Sutherland. Up to 20 birds were resident in Dornoch by the end of June 1966; two nests found earlier (2 nestlings died in the first; 2 eggs were taken by a predator from the second) are the first evidence of breeding in the county (D. Macdonald).

Arran. One at Lamlash on 13th September 1966 is the first for the division (L. A. Urquhart).

Bute. Two on Little Cumbrae early in April 1966 are the first for the division (H. Miller).

Dunbarton. A nest with two eggs in a copper beech in Glenburn Road, Bearsden, in June 1965 is the first breeding record (J. Watson; and C. Johnston, Prof. M. F. M. Meiklejohn, C. E. Palmar).

St Kilda. The first three records were in 1965: one appeared on a building about 2 hours after the arrival of a ship from South Uist on 29th April; one was in the village area on 25th and 26th May; and one was on Hirta on 11th and 12th June (D. Gwynne).

Shetland. At least three pairs bred in gardens in Lerwick in 1965 (first nest found at end of June) and about 20 birds were present on 3rd August 1965; this is the first breeding record for Shetland (D. Coutts).

Only a few records have been given here, but this does not mean that other reports are not of interest. All of them are being carefully filed for future use. Any notes on Collared Doves in new places, or breeding anywhere in Scotland, and details of increases and decreases, are still wanted and should be sent to the editor.

Collared Doves have now been seen in every Scottish county except Peebles and Selkirk, and, in fact, in every one of the 50 faunal divisions except these two and East Stirling, South Perth and West Inverness. They have been recorded breeding in 26 divisions, but not yet in those mentioned above nor in Roxburgh, Isle of May, Kinross, Clackmannan, North Fife, South Kincardine, North Sutherland, Kirkcudbright, Renfrew, West Stirling, Arran, Bute, North Argyll, South Inverness, West Ross, West Sutherland, Skye, St Kilda and Fair Isle. ANDREW T. MACMILLAN.

Alpine Swift in Shetland

An Alpine Swift was seen at Compass Hill at 0800 hrs GMT on 31st May 1966 by R. A. Richardson and myself, and again two hours later by R. H. Dennis. Compass Hill is barren and 320 ft high, with a vertical cliff from the summit to the North Sea. The large swift shape, with brown wings, back, tail and breast band, and the white belly and chin, were unmistakable. The wingspan of almost 2 ft, and the rapid wingbeats alternating with long soaring glides, were almost hawklike. At times the bird was 200 ft above the summit, and at others almost at sea level under the cliffs. We were all impressed by this jet fighter of the bird world.

G. D. Joy.

(One on Unst on 13th June 1962 (*Scot. Birds* 2:249) is the only previous Shetland record.—Ed.)

Bee-eaters in Orkney

On 5th June 1966 a number of people, including Dr Bruce Campbell, E. J. Williams and myself, watched three Bee-eaters in Binscarth Plantations. The birds stayed fairly close together, usually perching on the topmost twigs or high branches of half-dead trees, from which they made sallies to capture insects, mainly bumble bees, which were brought back to the perch to be prepared (removing the sting) and eaten. They called to each other a good deal, especially when moving from one perch to another. The single, repeated call note is difficult to describe but it had a liquid quality. The flight was graceful and swallow-like. These brilliantly coloured birds were quite unmistakable, with long curved beaks, projecting middle tail feathers, chestnut and orange-yellow upperparts, bright green underparts and tails, and vivid yellow throats.

It appears that they arrived about 31st May and had disappeared by 6th June. This is the first recorded occurrence of the species in Orkney.

E. Balfour.

(We understand that a Bee-eater, the first for the island, was recorded on Fair Isle on 13th June 1966.—Ed.)

Grey-cheeked Thrushes on St Kilda and in Morayshire

On 29th October 1965 a bird flew ahead of me along Village Street, St Kilda, and began to feed in short grass

among stones. In colour it suggested a Song Thrush but it was clearly far too small, being more the size of a Robin. Apart from size it was in every respect a thrush, having a large dark eye, a moderate-sized bill and no peak to the crown (such as, say, a Whitethroat has). It moved like a Song Thrush or Blackbird, pitching forward with each hop or run and returning to a more upright stance when stopping; it also pecked for worms and other things in the same manner. It kept near cover—boulders, walls or woodpiles—and once hopped into a cleit. In colour it was olive-brown, like a Song Thrush but less yellowish, with pale buffish grey underparts. There were one or two distinct pale spots on the forewing. There were some marks on the upper breast but these could not be made out clearly until the bird faced me, when they showed as two conspicuous black moustachial stripes ending on the upper breast, where they gave way to black spots. The legs were pink.

Later in the day it rained heavily and I caught the bird in a ruined house. It was very bedraggled and had blood on the flank. It recovered when brought inside but unfortunately injured itself further by flying into the window. It fed eagerly on worms, but by evening appeared in poor condition, and it was found dead next morning.

A full description was made on the 29th after its capture. Of the soft parts, the iris was very dark brown; bill dark brown, with whitish horn base to lower mandible; gape chrome yellow, showing at base of closed beak; rictal bristles, three pairs; legs pale pinkish buff, paler on ventral surface. After it died the bird was skinned and found to be extremely thin. The skin was sent to Kenneth Williamson, who reported:

"It is a Grey-cheeked Thrush *Catharus minimus*. It is the fourth record for the British Isles and all have occurred during October, two early and two on 29th."

"**Description.** Upperparts from head to tail uniform dark olive-brown. Wings browner, the primaries a little paler on their outer margins, the primary coverts and alula broadly tipped blackish olive. Large pear-shaped buffish white spots on two median coverts in the left wing, and one in the right wing, indicate unmoulted juvenile feathers. Similar but smaller spots, almost worn off, remain at the tips of the innermost greater coverts of each wing, and there is a faint brownish buff line across mid-wing formed by the worn pale tips of the greater coverts."

"Underparts: chin white, with dark olive moustachial streaks at either side, descending onto throat; dark brown mottling at sides of neck. Throat and upper breast creamy to pale buff, heavily spotted with dark olive-brown, the spots becoming larger but more clouded on the breast. Lower breast and flanks washed with greyish olive; belly and vent white. Axillaries greyish, tinged olive; under wing-coverts mostly white, tinged brownish."

"Head: ear-coverts dark greyish olive, their hind-margins uniform and strongly outlined, but the feathers otherwise speckled buffish; no buff eye-rim. These two features rule out the possibility of its being a specimen of *C. ustulatus*."

"Measurements: wing 103 mm, tail 68 mm, tarsus 31 mm, bill from skull 17½ mm. Wing formula: 3rd primary longest; 2nd 4½ mm shorter, falling between 4th and 5th. Other primaries shorter than 3rd by: 4th 1 mm; 5th 7½ mm; 6th 14 mm; 7th 20 mm; 10th 30 mm. Distal secondary 3 mm shorter than innermost primary. Emarginated deeply on outer webs of 3rd-4th and very slightly near tip of 5th."

"Soft parts: Bill blackish brown above, yellowish white on basal half of lower mandible. Tarsi pale brownish in front, straw-coloured behind. As the skin did not reach me till 22nd November some changes may have taken place."

"Previous British occurrences of this North American thrush have been at Fair Isle, 5th-6th October 1953 (*Fair Isle Bird Obs. Bull.* 2: 3-8; *Scot. Nat.* 1954: 18-20), 29th October 1958 (*Brit. Birds* 52: 316), and Bardsey (N. Wales), 10th October 1961 (*Brit. Birds* 56: 192). The Bardsey specimen was examined by Charles Vaurie and was referred to the form *C. m. bicknelli*; the Fair Isle birds were indeterminate as to race but the St Kilda specimen would appear on wing length to belong to the northern form *C. m. minimus*, which ranges across Canada and Alaska and extends to Anadyrland in E. Siberia."

I should like to thank Dr W. J. Eggeling for his advice and assistance and Kenneth Williamson for critically examining the skin and identifying it.

PETER GRUBB.

(This St Kilda specimen was also examined by Ian H. J. Lyster of the Royal Scottish Museum, where it now is. The wing-length (103 mm) is well into the range of *C. m. minimus*—♂♂ 99-109 (average 104), ♀♀ 97-107½ (100)—and seems too big for *C. m. bicknelli*—♂♂ 88½-98 (92), ♀♀ 85-93 (88½) (Ridgway, R. 1882 *Proc. U.S. Nat. Mus.* 4: 377-379; 1907 *Bull. U.S. Nat. Mus.* 50 (4): 59-63).

Another Grey-cheeked Thrush, a first-winter male, was found dying at Lossiemouth on 26th November 1965 (*Brit. Birds* 59: 293). Full details will be published in *British Birds*. We understand that the wing of this bird measured 111 mm, making it unquestionably an example of the larger race *C. m. minimus*.

Subject to confirmation by the Rarities Committee these are the first British records of the species that can be definitely ascribed to the northern race *C. m. minimus*. As noted above, the two Fair Isle birds were indeterminate, while the Welsh one was referred to the southern race *C. m. bicknelli*.—ED.)

Current Notes

Compiled by P. J. B. SLATER

(Key to initials of observers : Miss P. Alexander, D. R. Anderson, N. K. Atkinson, R. S. Baillie, J. Ballantyne, D. A. Barbour, Miss P. G. Baxter, G. Bloor, H. Boase, T. Boyd, Miss E. Brown, R. J. Buxton, R. G. Caldow, A. Campbell, R. Campbell, J. F. M. Carson, D. Coutts, G. M. Crighton, N. P. Danby, Major P. Deas, R. H. Dennis, D. Dewar, R. C. Dickson, J. Douglas, J. M. Dunn, W. M. M. Eddie, N. Elkins, Sir R. Erskine-Hill Bt., M. J. Everett, J. Faulkner, M. Forrester, I. Gibson, A. G. Gordon, J. C. R. Gubbins, G. H. Gush, M. K. Hamilton, B. L. S. Hardy, R. Hewson, E. E. Jackson, P. James (PJs), A. Japp, R. A. Jeffery, P. Johnson (PJn), D. Joy, D. J. Law, A. F. Leitch, R. Lévêque, J. A. Love, I. H. J. Lyster, A. Macdonald, D. Macdonald (DMcD), M. A. Macdonald, Miss E. McEwen, J. MacGeoch, W. G. McKay, Dr P. MacMorran, Dr P. S. Maitland, D. Manning (DMg), Prof. M. F. M. Meiklejohn, T. D. H. Merrie, D. G. Middleton, F. M. Moore, W. M. Morrison, J. H. B. Munro, C. Murray, J. B. Murray, D. J. Norden, C. Ogston, D. W. Oliver, J. S. Oliver, T. Paterson, P. N. Paul, Dr I. D. Pennie, N. Picozzi, R. M. Ramage, A. D. K. Ramsay, G. A. Richards, S. Roberts, I. B. Roy, W. K. Russell, J. H. Simpson, I. C. Sinclair, P. J. B. Slater, Mrs E. Slee, Dr J. Slee, Mrs E. M. Smith, R. W. J. Smith, Dr T. C. Smout, G. Speedy, D. M. Stark, R. L. Swann, C. Tait, I. Taylor, Miss V. M. Thom, R. J. Tulloch, L. A. Urquhart, F. Walker, K. Walker, D. I. M. Wallace, G. Waterston, Mrs M. I. Waterston, A. D. Watson, J. Watt, Hon. D. N. Weir, Dr R. S. Weir, T. Weir, J. P. M. Whipp, G. T. White, Mrs W. H. Wild, R. D. Wilson, W. Wyper, J. G. Young, B. Zonfrillo.

Unless otherwise stated all dates refer to 1966.)

Distribution

This section does not include records from before 1st May 1966. As usual the arrival of geese and winter thrushes is being held over to allow a fuller account in the next issue. Details of an influx of continental migrants on the east coast in late August and early September are given separately at the end of this section.

No doubt on its way to the sea, an adult **Black-throated Diver** was seen at Lintrathen Loch, Angus, on 10th August (GMC).

There seems to have been an increase in the number of **Great Crested Grebes** nesting in Fife this year. At Morton Lochs, where three pairs bred in 1965 (3: 367), there was a further increase to five pairs this year and seven broods were raised (CT). At Lindores Loch there were at least ten pairs with young on 11th August—last year there were only about six pairs (JW).

A few **Red-necked Grebes** seem to winter annually along the south coast of the Forth: near Gullane Point, East

Lothian, the first was on 3rd and 10th September, and there were 2 on the 18th and 26th and 3 on the 25th (JSO, WW, BZ). A **Slavonian Grebe** was inland at Linlithgow Loch, West Lothian, on 19th September (TB, EMS, RWJS); and a **Black-necked Grebe** was at Cobbinshaw Reservoir, Midlothian, on 18th September (JB).

An interesting occurrence is that of a **Leach's Petrel** which was found exhausted in Inverness on 6th September and died two hours later (JM). A new breeding locality for **Storm Petrels** is Bressay, Shetland, where seven birds were caught and a nest found (EEJ). A colony of **Manx Shearwaters** at West Neap, Fetlar, was also discovered for the first time this year—a visit on 26th August suggested that there were at least 100 pairs in the area (RJT).

Not surprisingly, several noteworthy records are as a result of the *Devonia* cruise: a **Great Shearwater** was seen off St Kilda on 18th July and a **Sooty Shearwater** was south of Foula, Shetland, on 19th (MFMM). Other occurrences of this last species are of four seen during a sea-watch from Rudh' Re, Wester Ross, on 2nd September (PNP, RDW); one seen at sea off Peterhead, Aberdeenshire, on 1st September (NE); and one flying past Fife Ness on 25th (DWO).

Although not previously published, **Herons** have apparently bred on the small islands in Loch Shuna, Argyllshire, for at least six years. They used to nest on the island of Dun but a visit on 11th August gave no sign of them there, though five nests were discovered on Buidhe Isle nearby (JD). An additional heronry for Banffshire is one at Parkmore House, Dufftown, which has been occupied for several years and consisted of at least nine pairs this year (RH).

Night Herons have not been reported so much in the Edinburgh area recently although there is still a free-flying colony at Edinburgh Zoo, but an immature was at Duddingston Loch between 26th August and 20th September (DRA). An escaped **Flamingo** of the Chilean race has already been reported at Tyninghame, East Lothian, in May (4: 240). Since then there have been several records, the descriptions and dates suggesting that all could refer to a single Chilean bird. On 30th July it was at Ardoch, Dunbartonshire (DMg), and it was seen at Endrick Mouth, Stirling/Dunbartonshire, on various dates between 31st July and 13th August (MF, PSM, TDHM). On 16th August it was at Ardmore Bay, Dunbartonshire (TDHM); on 19th it was seen at Skinflats, Stirlingshire, and on 21st at Longannet, Fife (IT). It was again at Ardmore Bay on 25th (TDHM), and at Loch Lomond on 26th (AGG, DMg). The last record is for 11th September when it was seen near Kilchoan, Ardnamurchan, Argyllshire (ES, JS).

A female **Garganey** on Whalsay on 25th September (JHS), and a drake **Gadwall** at Loch Hillwell on 26th (RE-H), are both unusual occurrences in Shetland. Three **Pintail** at Thriepley Loch, Angus, on 26th August (HB), and two at Stormont Loch, Perthshire, on 18th September (VMT), are also noteworthy. At least one pair bred successfully at Loch Ken, Kirkcudbrightshire, where a female was seen with three young on 3rd July (ADW), while what was probably a different bird was seen with five young at about the same time (GHG per ADW). A count of 32 **Shoveler** at Duddingston on 18th August is a high one (DRA), and three pairs were noted at the Almond Estuary, on the border of Midlothian and West Lothian, on 18th September (TCS).

Summering drake **Scaup** have been a single at Eden Estuary, Fife, on 26th June and two there on 10th July (CT); one on a pond near Dunalastair, Perthshire, on 3rd July (RL); and three on Loch Ryan at Stranraer, Wigtownshire, on 10th July (PJBS). In August, two were at Loch of Lowes, Perthshire, on 18th; one was at Loch Shandra, Perthshire, on 20th (RMR); and one was at Lochgoin, Renfrewshire, on 25th (LAU). An immature male was seen at Loch Leven, Kinross-shire, on 19th September (TCS).

There are three interesting breeding records for **Tufted Duck**: a female with two young on Loch Asta, Shetland, on 31st July (DC); one with three young on Loch Ospisdale in Southeast Sutherland on 1st July (DMcD); and one with four young on the Union Canal at Craiglockhart, Edinburgh, on 7th August (IDP). Five birds of this species were on the pools behind the dunes at Aberlady, East Lothian, on 17th September (PJn, AFL). A duck **Pochard** with four small young was seen on Castle Semple Loch, Renfrewshire, on 23rd July (LAU).

Some idea of the numbers of **Common Scoter** spending the summer off the east coast may be gained from the fact that they were flying north past Fife Ness at a rate of 100 per hour on 17th July (DWO).

The discovery of an **Eider** duck with young at Sandgreen, near Gatehouse-of-Fleet, Kirkcudbrightshire, on 8th June is the first definite breding record for that county since 1908 (GB per ADW). The raft of moulting birds off Troon and Prestwick in Ayrshire reached a peak of 1120 on 19th July, when it included only five females (GAR).

Other ducks found in unusual places were two female **Goosanders** at Virkie, Shetland, on 27th September (DJ); and a female **Shelduck** inland at Yetholm, Roxburghshire, on 25th September (RSB).

A wary **Barnacle Goose** on Eilean Hoan, Sutherland, in mid June made only short flights when disturbed and may have

been unable to migrate north in the spring (RJB).

A further increase is reported in the number of **Canada Geese** at Rowbank Reservoir, Renfrewshire/Ayrshire (see 2: 377). On 27th July 52, including 10 immatures, were counted there (RGC, LAU). Possibly on their moult migration, 11 were seen in flight at West Links, between Gullane and North Berwick, East Lothian, on 25th June (WGM); and 14 were at Duddingston on 15th June (DRA). The flock on the Beauly Firth numbered about 110 on 3rd June but later counts suggested that about 160 birds were present (WMM).

Three **Whooper Swans** spent the summer on the Forth in Clackmannanshire (TP); two were seen at Forfar Loch, Angus, on 16th August (HB); an adult was on the south side of the Beauly Firth on 27th August (TCS); and another was on the Tay in Perth on 31st July (IG). At the west end of Loch Tulla, Argyll, an adult was seen on 31st July (JPMW) and on 28th August (GW, MIW). Another, which is injured and unable to fly, is still on Glenbuck Reservoir, Ayrshire, after three years there (GAR).

The **Hen Harrier** has not been recorded breeding in Bute, but a female was seen at the south end of the island near Quien Hill on 9th July (DGM).

An **Osprey** was in the area of Endrick Mouth between 19th and 21st August (AC, JMD, AGG, DJL, TDHM). It was seen to catch a fish at Balmaha, Stirlingshire, on 20th (TW). Single birds were noted during July at Tentsmuir, Fife, on 9th (DWO, JW), and flying northwestwards at Eyebroughty, East Lothian, on 31st (RSB, FMM). One flew over Loch of Lowes on 18th August (RMR), and one was seen in flight at Brechin, Angus, on 20th (GMC).

The only **Quail** reported is one which was both heard and seen at Paisley Moss, Renfrewshire, on 22nd May (RGC, IG, RAJ).

A curious place for a **Ringed Plover** to be seen is on top of Carn Ban Mor, Inverness-shire, where one was found at a height of 3500 feet on 3rd August (ADKR). Two early **Grey Plover** were at Barassie, Ayrshire, on 30th August (GAR).

A **Woodcock** was flushed from its nest containing four eggs at Eaglescairnie, Haddington, East Lothian, on the late date of 24th July. This nest was also unusual in being situated in the middle of a field some 40 yards from the nearest cover, though concealed in a clump of ryegrass. Despite this the eggs hatched successfully on 10th August (JCRG).

There are rather few records of **Black-tailed Godwits** for this autumn:

Tarty Burn, Ythan Estuary, Aberdeen—1 on 10 Sept (CO).

Arbroath, Angus—1 on 7 Aug (NKA, IG).
Tentsmuir—9 early birds on 3 July (TP).
Eden Estuary, Fife—50, many in breeding plumage, on 14 Aug (DWO).
Skinflats, Stirling—1 on 30 Aug (TDHM).
Seafield, Edinburgh—2 on 28 Sept (MJE).
Barassie—14 on 2 July (JGY); 1 on 20 Aug (LAU).
Troon, Ayr—1 on 8 Sept (GAR).
Piltanton, Luce Bay, Wigtown—1 on 17 Aug, 2 on 23 Aug (RCD).

A pair of this species bred once again this year in southern Scotland close to where they nested in the previous two years (3: 256, 424). On 23rd May the nest contained four eggs and at least two young are reported to have been reared to the flying stage (Ed.).

A **Bar-tailed Godwit** was seen at Achnahaird Bay, Wester Ross, on 25th August (TCS).

The following are **Green Sandpiper** records:

Whalsay, Shetland—1 on 5 Sept (JHS).
Foula—1 on 13 Aug (RJT).
Fair Isle, Shetland—2 on 4 Aug and small numbers till 13 Sept; maximum 3 on 10-11 Aug (RHD).
Scrabster Brae, Caithness—1 on 3 Aug (PM).
River Don near Kinaldie, Aberdeen—1 on 31 Aug (CO).
Montrose Basin, Angus—2 on 8 Aug; 4 on 10 Aug; 1 on 12 Aug (GMC).
North Esk mouth, Angus—1 on 12 Aug (GMC).
River Kelvin, Summerston/Bardowie, Stirling/Renfrew/Dunbarton—up to 4 between 20 Aug and 8 Oct (WMME, DJN, WKR).
Dow Loch, Cleish Hills, Kinross—1 on 28 Aug (JB).
Aberlady—1 at freshwater pools on 6 Aug (JSO).
Tyninghame—regular from 31 July with 3 on 28 Aug and still 2 on 18 Sept (TB, EMS, RWJS, CT).
River Bowmont, Yetholm, Roxburgh—1 on 7-9 Sept (RSB).
Bogside, Ayr—1 on 15 Aug (GAR).
Near New Cumnock, Ayr—1 on 19 Sept (GAR).

Migrant **Wood Sandpipers** have been seen as follows:

Unst, Shetland—1 on 12 Aug (FW).
Fair Isle—1 on 31 July; singles on 11 days between 5 Aug and 7 Sept, with 2 on 9 Aug and 5 Sept (RHD).
Montrose Basin—1 on 11 and 13 Sept (GMC).
St Vigean's Marsh, Arbroath, Angus—7 on 8 Aug; 1 on 10 Aug (NKA, IG).
Skinflats—1 on 22 Aug; 1 freshly dead on 25 Sept (IT).
Aberlady—1 on 13 Aug (EMS, RWJS).
Tyninghame—1 on 10 Sept (ADKR).
Gadloch, Lanark—1 on 27-31 July (BZ).
Paisley Moss—1 on 31 July and 1 Aug (RGC, IG. DJN).

A **Redshank** which was picked up dead at Piltanton Estuary, Luce Bay, Wigtownshire, on 10th September was of the Icelandic race as it had a wing measurement of 172 mm (RCD).

Spotted Redshanks have been seen at the following places:

Fair Isle—3 on 27-30 Aug, with 4 on 28th; 1 to 3 on 9-14 Sept (RHD).
Castlehill, Caithness—5 on 3 Sept (DMS).
Dornoch Point, Sutherland—1 on 28-29 Aug (DMcD).
Longman Bay, Inverness—1 on 19 Sept (JM).
North Esk mouth—1 on 12 Aug (GMC).
Montrose Basin—2 on 12 Aug; 1 on 5th; 2 on 9th; 3 on 11th; 1 on 13th and 1 on 17th Sept (GMC).
St Vigean's Marsh, Arbroath—1 on 9 Aug (NKA, IG).
Fife Ness—1 on 4 Sept (PGB, DWO).
Rosyth, Fife—1 on 11 Sept (DWO).
Skinflats—1 on 21, 22, 26, 27 Aug, 3 and 4 Sept (IT).
Aberlady—1 on 11 Aug (DIMW); 2 on 25 Aug (MAM, RLS); 1 on 14 Sept (ADKR).
Tyninghame—1 on 14 Aug (MFMM); 7 on 28 Aug (TB, EMS, RWJS).
Bogside, Ayr—1 on 15 Aug (GAR).
Loch Ryan—2 on 17 Sept (RCD).
Wigtown Merse—3 on 18 Sept (RCD).

A **Greenshank** at Soleburn, Loch Ryan, is worth mention as being so far south as early as 9th July (RCD). A **Knot** was seen inland at Rowbank Reservoir on 4th September (IG, RAJ, GTW).

The following are reports of **Little Stints**:

Virkie, Shetland—singles on several days about 21 Sept (DC, DJ).
Foula—singles on several days in mid Aug (RJT).
Fair Isle—1 on 30 Aug; 1 on 6-11 Sept (RHD).
Montrose Basin—5 on 11 Sept; 1 on 23rd and 6 on 28 Sept (GMC).
Buddon, Angus—2 on 2 Sept; 1 on 19 Sept (GMC).
Skinflats—2 on 4 Sept (JFMC); 1 on 25 Sept (IT).
Aberlady—1 on 25 Aug (MAM, RLS); 1 on 26 Sept (WW, BZ).
Tyninghame—1 on 10-11 Sept; 1 on 17th and 2 on 18 Sept (TB, ADKR, IBR, EMS, RWJS, CT).

As with most other waders the number of **Curlew Sandpipers** seen has been about average:

Fair Isle—1 caught on 4 Sept (RHD).
Thurso, Caithness—1 on 11 Sept (PJs).
Gruinard Bay, W. Ross—1 on 18 Sept (RE-H).
Montrose Basin—2 on 13, 17 and 23 Sept (GMC).
Eden Estuary—1 on 3 Sept (WMME, WKR).
Fife Ness—2 on 24 Sept (DWO).
Skinflats—1 on 25 Sept (IT).
Gullane Point—2 flying past on 17 Sept (PJn, AFL).
Tyninghame—1 on 3 Sept (ADKR); 3 on 10 Sept (MAM).
Barns Ness, E Lothian—1 on 1 Sept (MJE, IHJL, ADKR).
Troon—1 on 10 Sept (RGC).

Two **Sanderling** were seen at Achnahaird Bay on 25th August (TCS). This species is unusual as far up the Forth as Skinflats, where there were three on 19th and two on 22nd August (IT). One was at Seafield, Edinburgh, on 28th September (MJE).

Ruff records are again too numerous to give in detail. The earliest was a male moulting from breeding plumage at

Buddon Burn on 22nd July (DAB). At Skinflats the first was on 27th July and varying numbers were seen regularly thereafter, with a peak of 25 on 7th September (IT). Numbers seen elsewhere were smaller but for a flock of 55 at Tyninghame on 14th August (TB, MFMM, RWJS).

A juvenile **Red-necked Phalarope** at Barassie on 20th August was rather wary when in association with some Dunlin but after it parted from them it could be approached to within a few yards, as is characteristic of this species (GAR).

On the west coast, seven **Great Skuas** were seen from Rudh' Re, Wester Ross, on 2nd September (PNP, RDW), and one was seen from a boat between Brodick and Ardrossan in the Firth of Clyde on 17th September (LAU). Single light-phase **Pomarine Skuas** were seen between the Great Cumbrae and Largs on 23rd May (BLSH), and off Fife Ness on 17th July (DWO). In Shetland a **Long-tailed Skua** was seen from the *Devonia* near Foula on 19th July (EM), and another was near Hascosay on 27th September (RJT).

Four **Lesser Black-backed Gulls** flying west off Troup Head, Banffshire, on 6th September and one going south at Sands of Forvie, Aberdeenshire, on 7th were of the Scandinavian race (CO).

Single **Glaucous Gulls** seen have been an immature at Ravelston, Edinburgh, on 11th and 12th September (PA); another at Paisley Moss on 18th August and 25th September (MJE, IG, GTW); and an adult at Nigg Bay, Kincardineshire, on 28th September (ADKR). This species continues to be seen regularly on the Ayrshire coast each winter; an immature was at Ayr Harbour on 26th August and a near adult was found dead at Turnberry on 15th September (GAR).

The earliest **Little Gull** was at Kingoodie, Perthshire, where an immature was seen on 8th July (HB). The first was at Kilconquhar Loch, Fife, on 10th July and numbers there reached a peak of 310 on 17th August (DWO). Other high counts are of 96 at Buddon on 2nd September and 134 at Carnoustie on 16th (GMC). In less usual places, an immature was on the Tay above Perth on 12th September (CM), and one was seen flying past Gullane Point on 14th August (JAL).

A first-summer **Kittiwake** seen near Carsphairn, Kirkcudbrightshire, on 22nd May was some 25 miles from the sea (ADW). Two **Black Terns** have been seen: one at Kilconquhar Loch on 17th August (DWO), and the other at Linlithgow Loch on 19th September (TB, EMS, RWJS).

Three adult **Common Terns** with two chicks were discovered on a small islet in the new Westwater Reservoir, near West Linton, Peeblesshire, on 31st July. The island, which will be

submerged eventually by the rising water, was at that time eighteen inches above water at its highest point (MKH, JHBM). **Little Terns** first bred in Wigtownshire in 1957 (1: 120). This year two pairs were found at Chapel Rossan Bay, Ardwell, on 29th June and the breeding of one pair was confirmed when two chicks were found on 6th July (RCD).

A **Sandwich Tern** was at Seilebost, Harris, on 4th July and another at Back, Lewis, on 13th (MAM). On Fair Isle, there were two on 3rd July and one on 14th August (RHD). High autumn counts in more usual places are of about 100 at Musselburgh, Midlothian, on 11th August (DIMW), and 500 at Aberlady on 14th (ADKR).

A **Turtle Dove** was recorded at Kinlochewe, Wester Ross, on 17th and 20th May (EB, RC), and one was at Bixter, Shetland, on 16th July (DC). Though within their range, single **Green Woodpeckers** at Eskdalemuir, Dumfriesshire, on 25th June (DIMW), and in the Royal Botanic Garden, Edinburgh, on 25th September (ICS), are worth mentioning in view of the local distribution of this species. A pair was discovered in Craigmaddie Wood (near Milngavie), Stirlingshire, on 31st July (WMME).

Two pairs of **Swallows** nested on Unst, Shetland, this year, the young leaving their nests on 7th and 10th August respectively (FW). In the Outer Hebrides one was at Rodel, Harris, on 5th July, and a **House Martin** was seen at Stornoway, Lewis, on 13th (MAM). The numbers of this last species breeding in the northeast seem to have fallen this year and none could be found at their usual sites in Banchory (NP).

At Borve, Harris, there was a **Blue Tit** on 22nd July and a pair of **Coal Tits** was in the same place on 25th (MAM, RLS).

Two **Grasshopper Warblers** were singing at Yetholm Loch on 8th July as well as the bird previously reported from there (4: 249) (RSB). Singles were heard at Carron, Morayshire, between 7th and 11th June (SR), and at Barnhill in Perth on 29th June (VMT).

Far north for these species, two **Blackcaps** were singing in Strath More, Wester Ross, between 29th May and 9th June (LAU), and a **Chiffchaff** was in the wood at North Bay, Barra, between 30th July and 11th August (WHW). One was also heard at the end of June in Rothiemurchus, Inverness-shire (DNW).

A **Grey Wagtail** flew west over the Meadows, in the centre of Edinburgh, on 8th September (TCS). Outwith its breeding range a female was seen at Rodel, Harris, on 18th July (MAM). On the east side of the country a female **Yellow Wagtail** was at Skinflats on 9th July (IT), and a male *flavissi-*

ma was recorded at Leith Docks, Edinburgh, on 18th September (CT).

A juvenile **Hawfinch** died when it flew into a glass windowpane at Crieff, Perthshire, on 30th June (VMT). In south Selkirkshire, an area for which there is no breeding record of this species, a fully-fledged juvenile was seen at Ettrick Marsh (at the confluence of the Tima and Ettrick Waters) on 10th August (DIMW). Another Hawfinch is reported from Roslin, Midlothian, on 8th September (ADKR).

An adult male **Siskin** was watched by several cruise members at Jarlshof, Shetland, on 20th July (MKH). Single males were also at Fair Isle on 12th and 23rd of that month (RHD), and one was singing at Kilconquhar on 10th (DWO). At a more normal time for migrants two were noted in the company of about 150 **Redpolls** at Yetholm on 25th September (RSB). A particularly large flock of **Twite** at Rhilochan, Rogart, Sutherland, on 10th September consisted of over 200 individuals (DMcD).

A hint that a **Crossbill** invasion might be approaching was given by one or two observations in the last number (4: 251). There have indeed been several further reports but these suggest a more limited influx, confined mainly to the north. The daily record at Fair Isle indicates two separate arrivals, the first from mid June to early August and the second in early September, possibly connected with the appearance of other continental migrants at the same time (see below). Other reports also fit nicely into this picture. Numbers at Fair Isle in July showed irregular fluctuations with peaks of 20 on 7th, 36 on 9th and 47 on 16th. Thereafter the numbers fell off and the only August record was of five on 5th. From 1st September more began to arrive: maxima were 16 on 2nd and 15 on 5th and 6th. The last was seen on 12th (RHD). In the rest of Shetland there were many reports of singles, pairs and small parties during July and again in early September (RJT). In late September a few remained in gardens in Lerwick (DC). In Kirkcudbrightshire 12 were in Cairn Edward Forest on 25th June and 12 were seen at Dalry on 2nd July (ADW). Flocks of continental birds, distinguishable from the local ones by their call, were noted on Speyside from 5th July (DNW), and eight were at Loch Broom, Wester Ross, on 21st August (TCS). Finally, nine which arrived on the Isle of May, Fife, on 28th August (DWO), and a female and two immatures at Finstown, Orkney, on 3rd September presumably formed part of the second movement (PJBS).

Lapland Buntings are seen regularly at Fair Isle in September, and this was a good year for them with a maximum of 41 on 11th (RHD). Elsewhere, one was at Scatness, Shet-

land, on 14th September (DC, DJ), and two were at the North Esk mouth on 22nd (GMC).

A good count of **Tree Sparrows** is of about 60 at Marlee, Blairgowrie, Perthshire, on 18th September (VMT).

Continental migrants

A substantial fall of continental migrants took place on the east coast in late August and early September. On Fair Isle numbers of the commoner migrants began to build up on about 25th August and the main arrivals were between then and 3rd September (RHD). The daily records there provide a more sensitive 'migration meter' than is possible elsewhere, but other reports fit well into this picture, though concentrated mainly in the period 30th August to 1st September. The main species involved were **Whinchat, Redstart, Blackcap, Whitethroat, Lesser Whitethroat, Garden Warbler, Willow Warbler, Spotted Flycatcher** and **Pied Flycatcher** and there are too many reports of these to set out in detail. There were many occurrences of less usual birds, however, and some of the more notable of these are given below, excluding those classified as 'rarities':

Hoopoe—one at Reay, Caithness, on 4th and 12th September (JF, PJs, DMS).

Cuckoo—one tired bird in an Inverness garden on 30th August (WMM); one at Fife Ness on 23rd August and 3rd September (PGB); immature at Barns Ness, East Lothian, on 31st August and 10th September (AM, MAM).

Wryneck—many Shetland reports: one at Sandwick from 25th August to 4th September (DC); two on Out Skerries from 30th August to 1st September (JHS, RJT); one on Whalsay on 31st August (JHS); and one at Halligarth, Unst, on 4th September (RJT). First on Fair Isle were three on 26th August and peak was of 12 on 2nd September (RHD). Many on North Ronaldsay, Orkney, with maximum of seven in one day (KW), and three on the Isle of May between 27th August and 3rd September (DWO).

Treecreeper—one on Out Skerries on 30th August (JHS).

Bluethroat—at least five on Out Skerries on 31st August (RJT); one at Sumburgh on 9th September (DC, JHS); and one on Vord Hill, Fetlar, on 16th (per RJT)—all in Shetland. On Fair Isle one to two were noted on twelve days between 1st and 23rd September (RHD).

Reed/Marsh Warblers—one at Unst on 31st August (FW), and one at Barns Ness between 30th August and 1st September (MJE, IHJL, ADKR). One or two **Reed Warblers** were at Fair Isle between 31st August and 12th September, with five on 2nd (RHD). One was on North Ronaldsay on 31st August (RHD, KW).

Icterine Warbler—different singles at Fair Isle on 26th and 30th August and on 3rd September (RHD), and one killed by a cat on North Ronaldsay at about the same time (KW). Four on the Isle of May between 27th August and 3rd September (DWO); one at Fife Ness between 2nd and 5th September (PGB, TCS, RSW); and one at St Monance, Fife, on 8th September (DWO).

Barred Warbler—immature at Whalsay on 3rd September (JHS), and small numbers at Fair Isle from 23rd August with peak of nine on 26th (RHD). Several on North Ronaldsay in late August and early September and two were ringed (KW). Four were recorded on the Isle of May between 27th August and 3rd September (DWO). An immature at Barns Ness between 29th and 31st August (MJE, IHJL, AM), was joined by an adult, showing strong barring and a bright yellow eye, on 31st (MAM, ADKR).

Red-breasted Flycatcher—one at Barns Ness on 31st August (MAM, ADKR), and one on the Isle of May at about the same time (DWO).

Red-backed Shrike—singles on Fair Isle from 23rd August, with five on 2nd September and six on 3rd (RHD). Several also seen on North Ronaldsay and the Isle of May (KW, DWO).

Ortolan Bunting—in Shetland, one on Out Skerries on 31st August (RJT), and one at Grutness on 4th and 9th September (DC, DJ). Singles at Fair Isle from 2nd to 8th September with three on 3rd and two on 5th (RHD).

Although they are rarities still requiring the official stamp, this is no more than a formality for single **Scarlet Grosbeaks** at Fair Isle on various dates between 26th August and 28th September. Four **Yellow-browed Warblers** were trapped there on 28th September, and at least one further bird was present on 29th. On 21st a first-year **Lesser Grey Shrike** was caught and ringed (RHD).

Earlier observations—before 1st May 1966

An ailing **Gannet** seen on the edge of a Common Gull colony at Archiestown, Morayshire, on 4th April and later found dead was nearly 15 miles from the sea (SR).

Five **Red-breasted Geese** were feeding separately from about 1000 Pinkfeet in a grass field adjoining the moor half way between Longformacus and Greenlaw, Berwickshire, all afternoon (except when they flew over to drink at a nearby burn) on 21st March. The record has been accepted by the Rarities Committee on the basis that the birds were probably escapes (PD, GS).

An adult **Water Rail** was found perched on a fence post by

a field full of rushes next to the road three miles south of Comrie, Perthshire, in early May 1961. After it had been watched for some time five small chicks covered in black down appeared from amongst the undergrowth (AJ).

Near Harlaw Reservoir, Midlothian, on 15th April a **Nightjar** rose from a fern-filled valley, flew close past the observer and out across a field (RLS).

General observations—behaviour

Early in the summer a cock **Black Grouse** was seen displaying to a male **Pheasant** at Culloden, Inverness-shire. Neither this Pheasant nor a hen which was nearby paid much attention to the bird's misguided behaviour (WMM).

In late June several **Common Gulls** were noticed sitting in old Scots pines in Millbuie Forest in the Black Isle, Easter Ross. Two broken eggs were discovered beneath the trees, and a nest containing one warm egg was found at a height of eighteen feet, though this may in fact have been built by another bird and later adopted. By early July the egg had disappeared and there was no sign of any chicks. Another interesting point about this site is that the nearest water is some five miles away (NPD). A previous instance of Common Gulls building in a tree was also in Easter Ross (2: 266).

A fully-fledged juvenile **Arctic Tern** was seen practising fishing at Burray, Orkney, on 25th August. When given a small fish by one of its parents it flew up from the rock on which it was perched and repeatedly dropped the fish in the water and swooped down to pick it up again. The bird did this about thirty times above almost exactly the same spot before it finally landed again and began to eat (PJBS).

On 7th August two immature **Ravens** were watched prising limpets off the rocks and eating them on the shore at Blackness Castle, West Lothian (JBM).

Strange tales are often told of aggressive encounters between two species which could not possibly achieve any nutritional satisfaction from each other. One of these occurred recently in Midlothian where a cat was disturbed playing with a shrew. On being disturbed, the cat made off and the shrew proceeded to run round in circles on the road. After a short time, however, a **Robin** began to swoop down on it and finally landed and attacked it on foot for a moment or two before losing interest, both animals remaining all the while oblivious of the presence of the observer (DD). Such behaviour is certainly strange and without any apparent function: the Robin's aggression may have been triggered off by some predator-like aspect of the shrew's odd behaviour.

Corrections

Dr John Berry points out that the pair of **Canada Geese** found with a nest at Morton Lochs, Fife, on 23rd April (4: 242) were not in fact pure Canadas but descendants of cross breeding between a Barnacle gander and a Canada goose in the feral flock at Tayfield, Newport-on-Tay, Fife. This pair of 'Barnadas' has bred successfully at Morton Lochs in previous years but this year they appeared to desert their nest.

The record of a **Tree Sparrow** at Clunie Loch, Perthshire, on 29th June (4: 252) was made by HB and not VMT as stated.

Reviews

Europe: A Natural History. The Continents We Live On series. By Kai Curry-Lindahl. British edition. London, Hamish Hamilton (Chanticleer Press), 1964. Pp. 300; 243 photographs (108 in colour) and 21 halftone maps; coloured endpaper maps. 31¼ cm x 24½ cm. 94/6.

This is no mere picture book; but it does contain quite superb colour photographs of European scenery and habitat and wildlife. Many people would buy it for these alone. They should then discover that the text is most readable and interesting.

It might, inadequately, be described as a semi-popular ecological survey of European natural history from a conservation angle. Written with a broad sweep over the better-known forms of wildlife, and with plenty about birds, it covers one by one the most important regions from the Mediterranean and the Russian steppes to the tundra, taiga and the Arctic. The richest natural history areas are described, along with the hazards they face and efforts being made to preserve them. There is much to admire and much to worry about.

The quality of the chapters is a little uneven, some being far more informative than others, and it is not difficult to pick out errors of detail, but this is misleading. The total effect is highly instructive, and a tremendous amount of information is given. It is very good for us to be made to see our problems in an international perspective. For instance, anyone who thinks of the Mediterranean area as a semi-tropical holiday paradise will have his eyes opened to learn how much of the land is being steadily eroded into desert through gross misuse; the worst villain, apart from man, is the domestic goat, picturesquely herded by the peasants and tugging up every tuft of vegetation before it can spread and bind the soil.

At times the prose, at least in translation, is unfashionably colourful ("the mighty symphony of nature") and the author has an adjectival habit that makes it difficult to know what is bird and what is description ("the long-legged stone curlew"), but he is never dull. Britain is put in its place as "Europe's largest island" and our complacent view of ourselves is confirmed from outside by his comment that "My theory is that the British have a deeper feeling for and interest in nature than any other people in Europe."

This is a truly international volume: planned in New York, written in Stockholm, manufactured in Zurich, and published in London. The spelling, but only some of the bird names, reflects its American origin. With

a delightful British touch the price is "4½ gns. net"—a sum to baffle the bookseller's assistant. It is worth the money.

ANDREW T. MACMILLAN.

Birds in Colour. Illustrated by Karl Aage Tinggaard. Descriptive text by Bruce Campbell. Revised edition. London, Blandford, 1966. First published, Penguin, 1960; based on "Faglarna i Färg" (Sweden) and "Fugle i Farver" (Denmark). Pp. 231; 128 coloured plates (256 illustrations). 18 x 11¼ cm. 21/-.

This edition is little changed. The *Handbook* order is followed, and the plates precede the text. Each bird is numbered, and reference to its description is easy, and possibly quicker than when the relevant text is either a few pages before or after the illustration. It is essential to look at both together, since the picture is usually of one male bird in breeding plumage, and gives no size or scale.

Many of the birds are drawn with great felicity; a few are rather wooden. Some colours might be misleading, such as the brilliance of Willow Warbler and Chiffchaff, while the pinkish-buff Goosander could not gleam white in the distance. The original publication in Scandinavia determined the choice of species, or White-tailed Eagle and Scarlet Grosbeak, for instance, might not have been selected. The Nuthatch belongs to the paler race.

Bruce Campbell's concise and excellent text is written to supplement the plates. Included for each bird are status, distribution and habitat, and descriptive points not obvious in the plates, such as plumage differing with sex, age and season. Voice and habits follow, including stance, gait, feeding methods, flight, flocking and roosting. Most accounts end: "May be confused with Nos...." The cumulative effect of this could well depress beginners, and the more positive "Distinguish from Nos...." would be preferable.

Inevitably comparison must be made with the *Field Guide*, for this book would fit the same pocket and also is concerned with identification, not breeding. Beginners may find it easier to deal with the smaller number of birds, but the pictures cannot compete for ease of recognition. The three black-and-white pages of ducks and birds of prey are insufficient, when compared with the innumerable silhouettes, the rows of birds in similar positions and the Petersonic lines to which we have become accustomed. One feature in which the book does score is that habitat and distribution, concerned only with Britain, can be treated more fully.

WINIFRED U. FLOWER.

Sea Birds. A Shell Nature Record. British Bird series. No. DCL 701. One 33⅓ r.p.m. 7" record in illustrated descriptive sleeve. Recorded and edited by Lawrence Shove. Published by Discourses Ltd, 21 Manchester Square, London W.1, 1966. 12/6.

This is the first of five records, and promises well for the series. The voices of Gannets and five species of gull fill one side, while auks and petrels call from the other. The sleeve, with pictures of the birds by Hilder, White and Ennion, is delightful. Inside are Jeffery Boswall's brief, clear notes on each bird and its calls.

The introduction is simple and sufficient. Each bird is named before it is heard. The recordings were made on Skomer, Skokholm and Grassholm, but take you immediately to wherever you have heard these sounds, watching the Guillemot ledges and looking for the Razorbills in their crevices. Puffins moan and complain, and every movement of a pair of

Fulmars can be imagined to fit the sounds. Yet a more ecstatically vocal pair, with a more varied repertoire, might have been found. The Storm Petrels are fine, and then, best of all, come the Manx Shearwaters.

The Gannet chorus and the throaty gurgles of individual birds are typical of a colony. Not all the vocabulary of the gulls can be given, but basic differences are well demonstrated. Attention is called to the deeper note of the Lesser Blackback, following several of the Herring Gull's calls. There is rather much of the Greater Blackback's alarm call.

This record can teach, but its main value is probably to give pleasure in retrospect. The Manx Shearwater made my day.

WINIFRED U. FLOWER.

(We have also received **Garden and Park Birds** and **Woodland Birds**, Nos. DCL 702-3 in the same series.—ED.)

Letter

SIR,

The birds of Cramond

Since 1960 I have been making regular observations on the estuary of the Almond and its hinterland at Cramond and Dalmeny in Midlothian and West Lothian. In this fascinating area I have tried to concentrate on three aspects:

1. In making regular counts of duck, waders and gulls to trace and if possible explain their seasonal and annual fluctuations.
2. To chronicle the rapidly changing birdlife of Cramond Island.
3. To compile a full checklist of the area, comparable to that made by Hamilton and Macgregor for Aberlady Bay (the total for the Almond area now stands at 154 species).

This threefold task is laborious but also fun. I would enormously appreciate any help which members of the S.O.C. could give me, for many people must visit the area and see much that I miss. In particular I would value:

1. Any counts or estimates of the numbers of ducks (especially Mallard, Wigeon and Shelduck), waders or gulls made at any time on the Almond estuary, but especially before 1960.
2. Any notes, however slight, from Cramond Island at any time at all.
3. Any other records, new or old, that are unpublished or may seem of interest. This would include any records at all of herons, divers, grebes (except Great Crested), hawks (except Kestrel), Sanderling, auks, Cuckoo, woodpeckers, Pied Flycatcher, warblers (except Willow and Whitethroat), Hawfinch, Snow Bunting and Brambling; also any records of Shelduck before 1960, Eider between 1940 and 1965, large numbers of Cormorants or Shags, irruption species such as Waxwing and Little Auk, and Collared Dove, as well as proof of breeding of Woodcock or Redstart in the area.

If you can help I would be most grateful. All letters will be promptly acknowledged, all loaned notebooks promptly returned, and all help fully acknowledged in any publication of results. My address is 93 Warrender Park Road, Edinburgh 9.

T. C. SMOUT.

Requests for Information

Micro-lepidoptera in nests. A study is being made of micro-lepidoptera in birds' nests, It is thought that old nests of passerine birds may yield some interesting species. Readers are asked if they will help by sending some old nests, up to the end of February 1967, to B. Morrison, Room R/127, Government Buildings, Sighthill, Edinburgh 11. Telephone CRA 4010, Extension 244.

Birds of Threipmuir. With a view to writing up the results of observations at Threipmuir Reservoir, Midlothian, over the past three years R. L. Swann would be very glad to hear from anyone who has records of common or uncommon birds seen there at any time. His present address is Plot 36, Highover Park, Station Road, Amersham, Bucks.

The Scottish Ornithologists' Club

REPORT OF COUNCIL

The Council submits the following Report for the past year:

Membership By the end of the session the membership of the Club had reached a total of 1628, an increase of 140 over the past year. 285 new members were enrolled while 145 members resigned or failed to renew their subscriptions. The comparative figures given below reflect an average increase of 120 members per year over the period of five years:

	31/8/61	31/8/62	31/8/63	30/6/64	30/6/65	30/6/66
Ordinary	852	918	1062	1194	1263	1373
Junior	177	181	195	198	222	252
Honorary	6	4	4	3	3	3
	1035	1103	1261	1395	1488	1628

The number of Deeds of Covenant signed by members rose from 205 to 228, representing 256 subscriptions and contributing a total of £216 as additional income to the Club. As many of these Covenants will have completed the seven year period by the end of the coming session, the Council hopes that these members will be willing to renew them for a further period, and that more members who pay income tax at the standard rate will consider paying their subscriptions in this way.

Death The Council records with deep regret the death of George Stout of Field, Fair Isle, one of the first Honorary Members of the Club. An appreciation is published in *Scottish Birds* 4: 255.

Honorary Member At the Annual General Meeting in October 1965 the Council had the pleasure of recording the election of Henry Boase, Invergowrie, as an Honorary Member of the Club.

Business of Council Five meetings of Council were held during the session. The Council approved a proposal to establish an Endowment Fund, to be used for the advancement of ornithology in Scotland and to further the objects of the Club. The Fund will be administered by the Council, and the Endowments bequeathed by Miss E. V. Baxter and Miss L. J. Rintoul are incorporated in it, with the addition of the proceeds of a special lecture on Greenland given by George Waterston.

The Committee appointed to organise the Scottish Bird-Islands Study Cruise met frequently under the chairmanship of Dr W. J. Eggeling. In January Mrs D. A. Harley left the staff and Miss Fiona McLaren was appointed in her place as Assistant Secretary with special responsibility for Cruise administration.

Dr I. D. Pennie and George Waterston served as members of the British Executive Committee concerned with the organisation of the International Ornithological Congress at Oxford, and Dr Pennie was appointed official Club Delegate to the Congress.

Dr John Berry and George Waterston represented the Club at meetings of the British Section of the International Council for Bird Preservation and attended the I.C.B.P. Conference at Cambridge, to which Mrs Waterston was also invited as a Club Delegate.

Scottish Bird-Islands Study Cruise The organisation of the Cruise as the sole excursion for the I.C.B.P. Conference and the International Ornithological Congress continued throughout the session. Sub-committees were formed to deal with publications, transport, lecture programmes, shore excursions and the entertainment of delegates during their final day in Edinburgh. A Cruise booklet describing the islands to be visited was printed for issue to all passengers. Administrative work increased in volume and an immense amount of correspondence was handled by the staff. By the end of the session the ship was fully booked with a long waiting list of applicants, and on 16th July she sailed with 905 passengers, half of whom travelled from overseas, representing 37 different countries. 392 of the passengers on board were also conference delegates. Shipboard organisation was carried out under the leadership of Dr W. J. Eggeling by members of the Committee, sub-committees and staff, with the assistance of members of the Club who were on board. The great success of this venture is shown by the number of letters of appreciation received from passengers, and nearly 50 have since become members of the Club.

The delegates who remained in Edinburgh before travelling on to the Congress were entertained in the Assembly Rooms, which were booked for the whole day for this purpose. Exhibitions were arranged and excursions were organised. In the evening the delegates were present at a reception in the University Library at the invitation of the Principal of Edinburgh University, and a specal train was chartered by the Club to take them overnight to Oxford. A full report of the Cruise will be published in *Scottish Birds*.

Annual Conference The Eighteenth Annual Conference was held in Dunblane in October with an attendance of 260 members and their guests. Lectures were given by Professor V. C. Wynne-Edwards, Dr Adam Watson and M. A. Ogilvie, on the theme of Arctic Adaptations in Birds and Mammals, and films were shown. The principal lecturer, Dr Finn Salomonsen, was prevented by illness from attending and the gap was filled at the last minute by Dr Watson, to whom the Council is greatly indebted.

Special Lecture During the autumn the Club sponsored a public lecture in the Usher Hall, Edinburgh, given by George Waterston, on the Danish Expedition to West Greenland 1965. The lecture was well attended, resulting in a profit of £75 which was given to the Endowment Fund at Mr Waterston's request.

Branches A full programme of lectures was carried out in eight Branches. Members of the Thurso group held regular informal meetings and also two public lectures during the winter. Attendance at Branch meetings showed an encouraging increase, particularly in Glasgow. The annual Solway weekend, organised with the assistance of the Dumfries Branch, was well attended, and local excursions were also organised by the Branches during the summer.

"Scottish Birds" Four numbers of the journal and a special supplement on "The Birds of Foula" were published during the year, completing the third volume with an index and commencing volume 4. The summer issue was devoted to articles of particular interest to Cruise passengers, and copies of this number and the special supplement were given to all delegates on the ship.

Scottish Bird Records Committee The Committee met once during the year under the chairmanship of D. G. Andrew. The Review for 1965 will be published in *Scottish Birds.*

Club Library A number of books were purchased for the reference library, and generous donations of scarce books, journals and reprints were also received. The lending section was used regularly by younger members of the Club.

Bookshop Sales of books throughout the year increased and regular orders were obtained from libraries and museums, in particular from Aberdeen University Library. Special displays of books were taken to the annual conferences of the Club at Dunblane, the British Trust for Ornithology at Swanwick, and the British Ornithologists' Union at Cambridge, and at each of these a large number of books was sold. The Bookshop was also taken on the Cruise, and the profit from the many books sold and orders since received will be shown in next year's accounts.

Scottish Centre As in previous years, a party of American birdwatchers on a tour of Britain, led by Orville Crowder, was entertained by members of the Edinburgh Branch Committee at the Scottish Centre. Ornithologists form overseas taking part in the Cruise also visited the Centre to obtain information on birdwatching in Scotland, and numerous postal enquiries were answered. Facilities were provided for informal meetings of Club members and discussion groups, for meetings of the Young Ornithologists' Club, and for executive meetings of the Fair Isle Bird Observatory Trust and the Isle of May Committee.

In October the Scottish Wildlife Trust moved their office from the temporary accommodation provided in the Centre to new premises.

Votes of Thanks In closing this Report, the Council wishes to record their sincere thanks to the many people who have given their help so freely to the Club throughout the session. These include the members who have covenanted their subscriptions, the donors of books and papers to the library, the lecturers to the Annual Conference and Branch Meetings, and the Branch Secretaries, Office-Bearers and excursion leaders who have worked so hard for the benefit of our members. The invitation extended by the B.T.O. and B.O.U. to display books at their Annual Conferences is also greatly appreciated. The Council is particularly indebted to the Cruise Committee and sub-committees who gave so much of their time to Cruise affairs, and to all the members who helped to make the Cruise such a success. They also wish to thank the Editor and Business

Editor of *Scottish Birds* for their invaluable services to the journal, which is now well established among the leading ornithological journals in Britain.

For the Council, IAN D. PENNIE, President.

THIRTIETH ANNUAL GENERAL MEETING OF THE CLUB

The 30th Annual General Meeting of the Club was held in the Hotel Dunblane, Perthshire, on Saturday, 22nd October 1966 at 6 p.m. Dr I. D. Pennie, President of the Club, presided over an attendance of over one hundred members.

Apologies Apologies for absence were received from Dr David Boddington, Dr Bruce Campbell, Sir Charles and Lady Connell, Miss Mary Henderson, and Professor and Mrs V. C. Wynne-Edwards.

Minutes The Minutes of the twenty-ninth Annual General Meeting, held in Dunblane on 23rd October 1965, were approved and signed.

Report of Council The Report of Council for the last session, presented by the Chairman, was adopted.

Election of Honorary Member In view of his great service to ornithology in Scotland, the Council had decided to elect Sir A. Landsborough Thomson an Honorary Member of the Club, and he had accepted the invitation with great pleasure. The meeting warmly approved the decision of Council.

I.C.B.P. British Section The Council had also appointed Sir A. Landsborough Thomson as Club representative to the British Section of the International Council for Bird Protection, in place of Dr John Berry who already served as a representative of the Royal Society of Edinburgh.

Scottish Bird-Islands Study Cruise The Chairman read a letter received from members of the Audubon Naturalists' Society of Washington, U.S.A., expressing their thanks for a memorable Cruise. An appropriate reply would be sent.

Endowment Fund The Chairman reported that the first donation to the Endowment Fund, the sum of £5, had been received from a member, and he expressed the appreciation of the Council for this gift.

Accounts The Accounts for the past session, presented by the Hon. Treasurer, were approved. He told the meeting that a surplus of at least £3500 might be expected from the Cruise, a substantial proportion of which was likely to accrue to the Club. The disposal of these funds was not yet decided.

Election of Auditor Mr Arthur Walker, C.A., was re-elected Auditor for the ensuing session.

Election of new Office Bearers and Members of Council In the absence of any other nominations, the Council's recommendations for the following elections were approved. President, Dr W. J. Eggeling to replace Dr I. D. Pennie who had completed his term of office. Vice-President, A. Donald Watson to replace Dr W. J. Eggeling. Council Members: Dr David Jenkins and R. G. Caldow to replace Dr G. M. Dunnet and Dr D. H. Mills, who were due to retire by rotation. The Chairman thanked the retiring members for their services to the Club.

Votes of Thanks The Chairman moved a warm vote of thanks to the Conference lecturers, the projectionist, exhibitors, excursion leaders, staff and all the members who had helped with the organisation. A vote of thanks was also warmly accorded to A. T. Macmillan, Editor of *Scottish Birds* and to M. K. Hamilton, Hon. Treasurer of the Club. The meeting closed with a hearty vote of thanks to the retiring President on the motion of Dr W. J. Eggeling, President-elect of the Club.

THE SCOTTISH ORNITHOLOGISTS' CLUB

Revenue Account for the year ended on 30th June 1966

	Year to 30/6/66	Year to 30/6/65
INCOME—		
Subscriptions received for year	£1771 19 9	£1628
Income Tax recovered on Covenanted Subscriptions	215 19 5	175
Dividends and Interest received	85 4 7	208
Surplus on Bookshop (Sales £2390)	642 12 10	605
Sale of "Scottish Birds" to non-members	88 4 6	83
Sundry Sales	161 10 8	123
Contribution from Scottish Wildlife Trust Ltd towards facilities granted by Club	16 0 0	52
Contribution from Scottish Ornithological Cruise Ltd towards facilities granted by Club	96 0 0	—
Donations received	59 4 6	2
	£3136 16 3	£2876
EXPENDITURE—		
Branch expenses including lectures	£309 15 0	£284
Travel expenses of Council Members and of Delegates to Conferences	65 14 9	55
Secretarial Services	1142 7 11	845
Office Expenses	268 9 4	267
Scottish Centre for Ornithology and Bird Protection: Club's share of running expenses including £100 annual contribution to the House Fabric Fund	317 8 1	364
Cost of books purchased for Library	81 11 1	134
Cost of publishing "Scottish Birds" (less advertising revenue £266)	523 8 3	336
Cost of publishing "Foula" Supplement	148 13 11	—
Net Cost of Annual Conference	2 5 1	5
Subscriptions paid	15 12 6	15
Sundry Purchases	112 4 0	110
	£2987 9 11	£2415
Excess of Income over Expenditure carried to Balance Sheet	149 6 4	461
	£3136 16 3	£2876

Balance Sheet as at 30th June 1966

	As at 30/6/66	As at 30/6/65
Accumulated Surplus:		
As at 30th June 1965	£2286 9 4	£1825
Add: Excess of Income over Expenditure for year	149 6 4	461
	£2435 15 8	£2286

Made up of:

Cash: In hands of Secretary			£13 12 10	£11
In Royal Bank of Scotland No. 1 A/c			219 12 5	635
In Royal Bank of Scotland No. 2 A/c			61 4 2	3
In Edinburgh Savings Bank			357 17 8	346
In Account with Scottish Ornithological Cruise Ltd			65 18 5	9
			£718 5 6	£1004
Bookshop stock at valuation			666 0 0	314
Debts due to Club			140 3 6	174
			£1524 9 0	£1492
5% Defence Bonds			500 0 0	500
Loan to Edinburgh Corporation Mortgage at 6¼% repayable 1968			500 0 0	—
Safeguard Industrial Investments Ltd—700 Ord. Shares of 5/- each at cost			507 19 11	508
			£3032 8 11	£2500
Less:				
Subscriptions paid in advance	£71 0 0			56
Donation from the late Miss E. A. Garden—amount not yet expended ...	28 8 1			29
Debts due by Club	384 3 6			129
Amount due to Endowment Fund ...	113 1 8			—
			596 13 3	£214
			£2435 15 8	£2286

House Fabric Fund—Summary of Accounts for year to 30th June 1966

	Year to 30/6/66	Year to 30/6/65
RECEIPTS—		
Balance as at 30th June 1965	£162 19 1	£151
Year's rent from Royal Society for Protection of Birds	100 0 0	100
Year's rent from Mr and Mrs George Waterston ...	100 0 0	100
Annual Contribution from S.O.C. Revenue Account	100 0 0	100
Miscellaneous Interests	4 14 7	4
	£467 13 8	£455
EXPENDITURE—		
Repairs and maintenance (including stripping woodwork in hall—£60)	£69 0 0	£115
Property burdens	181 6 10	162
Insurance	15 3 7	15
	£265 10 5	£292
Balance on deposit with Dunedin Building Society ...	202 3 3	163
	£467 13 8	£455

Note: The balance of £202.3.3 includes £38.13.5 unexpended from the Harvey Donation.

Scottish Ornithologists' Club Endowment Fund

(the free annual income of which is available for the advancement of ornithology)

Year ended 30th June 1966

Income

Interest and Dividends received (gross)	£113 1 8

Expenditure

Grants made	Nil
Unexpended income for year	£113 1 8

Balance Sheet

Endowments as at 1st July 1965	
Miss L. J. Baxter	£1000 0 0
Miss E. V. Rintoul	1000 0 0
	£2000 0 0
Additional Endowment during year	
George Waterston O.B.E.: Proceeds of Edinburgh Lecture on Greenland ...	74 19 6
	£2074 19 6
Unexpended income	113 1 8
	£2188 1 2
Made up of:	
£1151 3½% War Stock at cost	£1000 0 0
976 Units of the Equities Investment Trust for Charities at cost	1000 0 0
On Deposit receipt	74 19 6
Due by Club's main funds	113 1 8
	£2188 1 2

EDINBURGH, 3rd October 1966—I have audited the foregoing revenue accounts for the year to 30th June 1966 and the Balance Sheet as at that date. I have accepted as correct the subscriptions and other receipts shown as received in the Books and the value placed on the Bookshop stock. Subject to this I certify that in my opinion the foregoing accounts are correctly stated and sufficiently vouched.

(Signed) ARTHUR WALKER,
Chartered Accountant.

COUNCIL AND OFFICE BEARERS OF THE CLUB FOR SESSION 30

Hon. Presidents : David A. Bannerman, O.B.E., LL.D., Sc.D., F.R.S.E.; Sir Charles G. Connell, W.S.; Rev. John Morell McWilliam, M.A.; George Waterston, O.B.E., F.R.S.E.

President : W. J. Eggeling, B.Sc., Ph.D., F.R.S.E.

Vice-President : A. Donald Watson.

Hon. Treasurer : Maxwell K. Hamilton, C.A.

Hon. Treasurer of House Fabric Fund : D. G. Andrew, W.S.

Secretary and Treasurer : Mrs George Waterston.

Editor of "Scottish Birds": A. T. Macmillan.

Assistant Editors of "Scottish Birds": D. G. Andrew, Dr T. C. Smout, P. J. B. Slater.

Business Editor of "Scottish Birds": Dr T. C. Smout.

Council : William Brotherston, R. G. Caldow, Dr David Jenkins, H. A. Maxwell, J. H. B. Munro, C. K. Mylne, G. L. A. Patrick, A. J. Smith, R. T. Smith, Miss V. M. Thom.

Branch Representatives to Council : J. M. S. Arnott (Glasgow); J. E. Forrest (Dundee); Miss F. J. Greig (Aberdeen); J. K. R. Melrose (Dumfries); G. A. Richards (Ayr); Miss O. T. Thompson (Edinburgh); J. Wiffen (St Andrews).

BRANCH AND GROUP OFFICE BEARERS

Aberdeen : Chairman, Prof. V. C. Wynne-Edwards; Vice-Chairman, J. Edelsten; Secretary, Miss F. J. Greig; Committee, A. Anderson, J. L. Riddell, Dr G. Swapp.

Ayr : Chairman, G. A. Richards; Vice-Chairman, S. L. Hunter; Secretary, Dr M. E. Castle; Committee, Miss J. E. Howie, T. B. Kay, R. M. Ramage, A. G. Stewart.

Dumfries : Chairman, William Austin; Vice-Chairman, A. D. Watson; Secretary, H. M. Russell; Committee, Miss J. M. Donnan, J. K. R. Melrose, D. Skilling, J. F. Young.

Dundee : Chairman, J. E. Forrest; Vice-Chairman, D. B. Thomson; Secretary, Miss J. Stirling; Committee, W. D. G. Henrickson, G. C. Sime, R. Summers, J. Hunter Sutherland.

Edinburgh : Chairman, M. K. Hamilton; Vice-Chairman, J. H. B. Munro; Secretary, Miss O. T. Thompson; Committee, T. Delaney, M. J. Everett, Miss M. E. Grace, I. H. J. Lyster.

Glasgow : Chairman, J. M. S. Arnott; Vice-Chairman, A. L. Ogilvy; Secretary, Mrs J. B. Hutchison; Committee, R. G. Caldow, Dr I. T. Draper, A. D. R. Palmer, G. L. A. Patrick.

Inverness : Chairman, H. A. Maxwell; Vice-Chairman, C. G. Headlam; Secretary, James MacGeoch; Committee, Miss J. Banks, Miss G. M. Bush, D. Gardiner, L. W. Payne, Dr Maeve Rusk.

St Andrews : Chairman, Dr W. Cunningham; Vice-Chairman, Miss D. M. Wilson; Secretary, Miss M. M. Spires; Committee, Miss J. V. Black, Miss M. H. E. Cuninghame, Miss G. L. C. Falconer, J. Wiffen.

Thurso : Chairman, Dr P. M. McMorran; Vice-Chairman, M. K. Goodchild; Secretary, D. M. Stark.

SCOTTISH BIRD RECORDS COMMITTEE

Chairman : D. G. Andrew.

Committee : A. G. S. Bryson, Dr J. W. Campbell, Sir Arthur Duncan, Dr W. J. Eggeling, A. T. Macmillan, Prof. M. F. M. Meiklejohn, Dr I. D. Pennie, Kenneth Williamson, George Waterston, Prof. V. C. Wynne-Edwards.

LIBRARY COMMITTEE

Dr W. J. Eggeling (Convener), Ritchie Seath (Hon. Librarian), Dr I. D. Pennie, George Waterston.

HONORARY MEMBERS

Clyde Bain Henry Boase P. W. G. Gunn Sir A. Landsborough Thomson

WEEKEND EXCURSION TO DUMFRIES

A weekend excursion has been arranged with the County Hotel, Dumfries, for the weekend 3rd to 5th March 1967, to see geese on the Solway.

Accommodation: inclusive terms £5.5.0, inclusive of gratuities, as follows—bed on Friday 3rd; breakfast, packed lunch, dinner and bed on Saturday 4th; breakfast and packed lunch on Sunday 5th. Members should inform the hotel in advance if they require dinner on Friday evening (extra).

Members may bring guests and should book direct with the Manager, County Hotel, Dumfries (tel. 5401), notifying him that they are attending the Club excursion. It is advisable to bring warm clothing, gum boots if possible, and thermos flasks.

WINTER EXCURSIONS

AYR

Sunday 4th March BARR LOCH. Leader, Miss J. M. Howie. Meet County Hotel, Ayr, 10 a.m. or Howwood Railway Station 10.30 a.m.

Saturday 1st April GALLOWAY. Leader, Dr M. E. Castle. Meet County Hotel, Ayr, 10 a.m.

DUNDEE

Sunday 6th November 1966 LINTRATHEN LOCH.

Sunday 11th December TAYPORT AND TENTSMUIR.

Sunday 8th January 1967 STORMONT LOCH.

Sunday 5th February EDEN ESTUARY.

Sunday 5th March DUNS DISH.

Sunday 2nd April FORFAR/RESCOBIE LOCHS. Meet City Square, 10 a.m.

Details will be announced at Branch meetings, or may be obtained from the Branch Secretary.

CHANGE IN AYR BRANCH MEETING

The meeting of the Ayr Branch on Wednesday 18th January will be held jointly with the Ayrshire Branch of the Scottish Wildlife Trust, in the Savoy Park Hotel, Ayr, at 7.30 p.m., to hear Mr Tom Huxley speak on "Conservation in a Changing Landscape." Members are asked to note the change of meeting place on this occasion.

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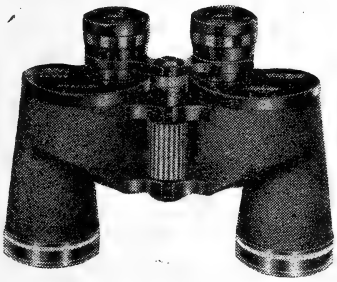

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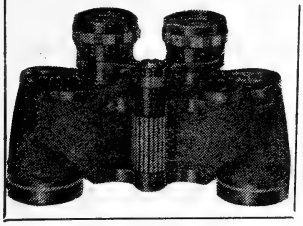

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THE SCOTTISH ORNITHOLOGISTS' CLUB

THE Scottish Ornithologists' Club was founded in 1936 and membership is open to all interested in Scottish ornithology. Meetings are held during the winter months in Aberdeen, Ayr, Dumfries, Dundee, Edinburgh, Glasgow, St Andrews and elsewhere at which lectures by prominent ornithologists are given and films exhibited. Excursions are organised in the summer to places of ornithological interest.

The aims and objects of the Club are to (a) encourage and direct the study of Scottish Ornithology in all its branches; (b) co-ordinate the efforts of Scottish Ornithologists and encourage co-operation between field and indoor worker; (c) encourage ornithological research in Scotland in co-operation with other organisations; (d) hold meetings at centres to be arranged at which Lectures are given, films exhibited, and discussions held; and (e) publish or arrange for the publication of statistics and information with regard to Scottish ornithology.

There are no entry fees for Membership. The Annual subscription is 25/-; or 7/6 in the case of Members under twenty-one years of age or in the case of University undergraduates who satisfy the Council of their status as such at the time at which their subscriptions fall due in any year. Joint membership is available to married couples at an annual subscription of 40/-. "Scottish Birds" is issued free to members but Joint members will receive only one copy between them.

The affairs of the Club are controlled by a Council composed of the Hon. Presidents, the President, the Vice-President, the Hon. Treasurer, the Editor and Business Editor of "Scottish Birds", the Hon. Treasurer of the House Fabric Fund, one Representative of each Branch Committee appointed annually by the Branch, and ten other Members of the Club elected at an Annual General Meeting. Two of the last named retire annually by rotation and shall not be eligible for re-election for one year.

A Scottish Bird Records' Committee, appointed by the Council, produce an annual Report on "Ornithological Changes in Scotland."

An official tie with small white Crested Tits embroidered on it can be obtained in dark green or in navy blue by Members only from Messrs R. W. Forsyth Ltd., Princes Street, Edinburgh, or 5 Renfield Street, Glasgow, C.2 at a cost of 17s 9d post extra. A small brooch in silver and blue can be obtained for the use of Members of the Club. Price 2s 6d each from the Secretary, or from Hon. Branch Secretaries.

Forms of application for Membership, copy of the Club Constitution, and other literature is obtainable from the Club Secretary, Mrs George Waterston, Scottish Centre for Ornithology and Bird Protection, 21 Regent Terrace, Edinburgh 7. (Tel. Waverley 6042).

CLUB-ROOM AND LIBRARY

The Club-room and Library at 21 Regent Terrace, Edinburgh 7, will be available to Members during office hours, and on Wednesday evenings from 7 to 10 p.m. during the winter months. Members may use the Reference Library and borrow books from the Lending Library. Facilities for making tea or coffee are available at a nominal charge and Members may bring guests by arrangement. The Aldis 2" x 2" slide projector and screen can be used for the informal showing of slides at a charge of 2s 6d per night to cover the replacement of bulbs.

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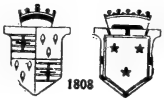

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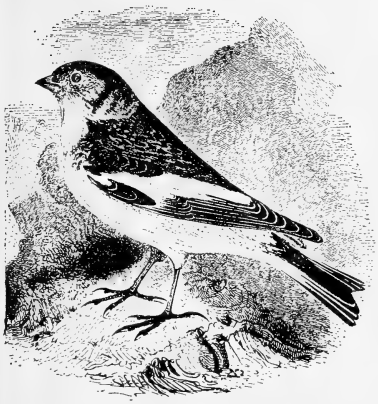

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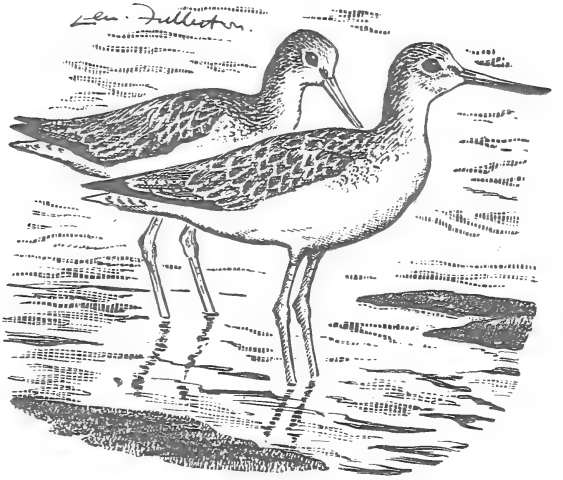

The Journal of
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Vol. 4 No. 5 *Spring 1967*

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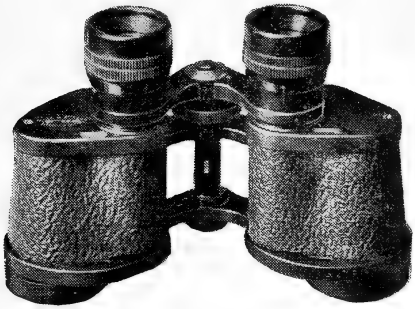

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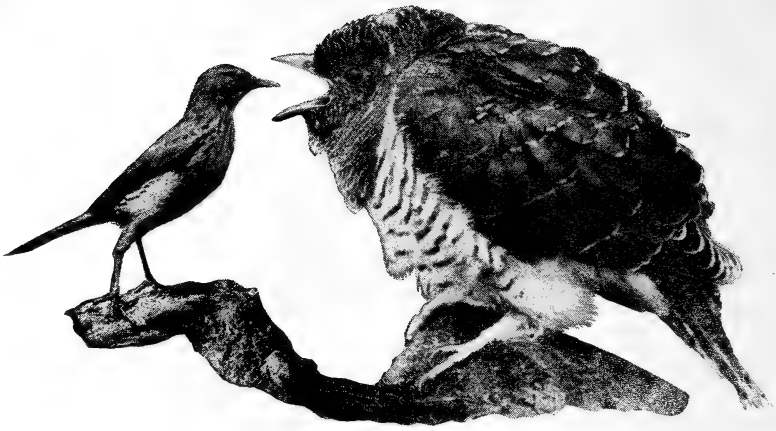

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Edited by Andrew T. Macmillan, 12 Abinger Gardens, Edinburgh 12.
Assisted by D. G. Andrew, T. C. Smout and P. J. B. Slater.
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Scottish Birds

THE JOURNAL OF THE SCOTTISH ORNITHOLOGISTS' CLUB

Vol. 4 No. 5 **Spring 1967**

Edited by A. T. MACMILLAN with the assistance of D. G. ANDREW, T. C. SMOUT and P. J. B. SLATER. Business Editor, T. C. SMOUT.
Cover Design (Greenshanks) by LEN FULLERTON.

Editorial

The cost of watching birds. One of the attractions of birdwatching is that it is a hobby which can cost as little or as much as one likes. No more is needed than an observant eye. Birds are everywhere, or almost. Go where you may, you can watch them free of charge. It is our right. Or is it?

We have to share the countryside with many people. They want to build houses, do research, farm, shoot, mine, picnic, camp, walk, climb, swim, ski, make roads, fly hovercraft, generate electricity, plant trees, and live there. Recreation or development, these are perfectly defensible activities. But they cannot all take place together, and we have to compromise. Many of these interests are willing to pay highly for the use of the land; not just to exploit it for themselves but to fit in with the wants and needs of others. Should we expect to have it all for nothing? Should we leave it to other people to provide us with facilities for watching birds free of charge? Nature reserves are an excellent idea; it is good to see more and more being created, we say; but do we do enough about it?

At the 1966 S.O.C. annual conference Dr Ian Pennie alluded to this. We should be prepared, he said, to pay more than we do for our birdwatching. Admission charges for good bird reserves are still the exception, but it is a thought that, with the cry for space on all sides and the wish of so many people to get out into the country, the day could come when such oases were the only places worth visiting. If we enjoy watching birds ought we not to be willing to pay for the pleasure, each within his own means, to make sure that we can continue to enjoy it? Not everyone wants to be a campaigner, but most of us can help quite simply by supporting the voluntary organisations which will do the work for us. If you do not already support them you might like to think about some excellent bodies, each of

which will gladly send fuller details and welcome subscriptions, donations and legacies. If you already subscribe, perhaps you have a friend who might be interested.

Royal Society for the Protection of Birds. Though the protection of the Speyside Ospreys is one of the R.S.P.B.'s most spectacular activities, membership in Scotland is only 60% of the national average. Maybe the press advertising is more telling in England, but this is a body that every birdwatcher should support. It is big enough to be heard effectively at a national level when it speaks for birds. The Scottish office, run by George Waterston, is at the Scottish Centre for Ornithology and Bird Protection, 21 Regent Terrace, Edinburgh 7, and the good work being done in Shetland, Orkney, the Hebrides, Speyside and all over the country is quite out of proportion to the Scottish membership. Important new projects are in the pipeline. A mere 31/6 a year not only supports all this but brings you six issues of *Birds,* with interesting general bird articles and news of the society's activities.

British Trust for Ornithology. The B.T.O. appeals particularly to the more serious birdwatcher with a rather more scientific leaning. It organises cooperative enquiries such as the Common Bird Census, of vital importance in assessing the effects of changing conditions on birds. People all over Britain contribute in this way to the study of problems affecting birds and their relationships with man. When conservation issues arise it is to such studies that one looks for the facts. The B.T.O. does not create nature reserves but aims to direct the activities of field workers, mostly amateurs, along the most useful lines. The subscription of 50/- includes regular bulletins and the quarterly issues of *Bird Study;* new members are urgently needed to help finance the work being done. In recent years the B.T.O. and R.S.P.B. have joined forces on several important projects, notably the work on the effects of toxic farm chemicals. Details may be had from Beech Grove, Tring, Herts, or from the Scottish Centre.

Scottish Wildlife Trust. This is the newest of these bodies and purely Scottish, playing a similar role to the county naturalists' trusts in England. In line with modern thought its scope is wider than just birds. Preservation of sites of natural history interest against unjustified threats and exploitation, and their conservation in a planned and intelligent way, are clearly of value to birdlife, even where a particular site is of interest mainly for some other reason, for birds cannot live in a vacuum. The emphasis is on management to preserve the wildlife interest. The S.W.T. is not just con-

cerned with meeting threats and creating reserves; it is primarily anxious to work with other people, to see that the interests of natural history are considered at the time developments are planned, while it is still possible to do something. Subscriptions (20/-) should be sent to 8 Dublin Street, Edinburgh 1.

Faïr Isle Bird Observatory Trust. If you want to see rare migrants in Scotland or learn observatory techniques in the most unforgettable surroundings Fair Isle is the ideal place. Yet there is no guarantee that you will always be able to get there. The observatory and the island community are so closely linked that the one might not survive without the other. The problems of the people are primarily social: those of the observatory are purely financial. For one guinea a year you may become a Friend of Fair Isle and have copies of the *Fair Isle Bird Observatory Bulletin* twice a year and an annual report. If you would like to give a lump sum there is the *Fair Isle Bird Observatory Endowment Fund.* Details may be had from George Waterston at the Scottish Centre.

Scottish Ornithologists' Club Endowment Fund. To round off this survey, we mention our own fund for the advancement of ornithology, announced in the Summer 1966 issue of *Scottish Birds.* The club secretary will be happy to send particulars.

Current literature. Recent references of particular interest to Scottish ornithologists include:

A Check-List of the Birds of Ayrshire. G. A. Richards, 1966. *Ayrshire Archaeological and Natural History Collections,* second series 7: 128-169. Printed edition, slightly revised, of duplicated list reviewed *Scot. Birds* 3: 434.

The breeding biology of the Gannet *Sula bassana* on the Bass Rock, Scotland. J. B. Nelson, 1966. *Ibis* 108: 584-626.

The behaviour of the young Gannet. J. B. Nelson, 1966. *Brit. Birds* 59: 393-419. Bass Rock studies.

Numbers of Capercaillie in the Black Wood of Rannoch. G. W. Johnstone and F. C. Zwickel, 1966. *Brit. Birds* 59: 498-499.

Notes on the breeding biology of the Black Guillemot *Cephus grylle.* Roy H. Dennis, 1966. *Fair Isle Bird Obs. Bull.* 5: 205-208. New study started on Fair Isle.

Redwings breeding in Sutherland. E. G. Holt, 1966. *Brit. Birds* 59: 500-501. North Sutherland record and summary of Scottish records.

Numbers of Great Skuas and other seabirds of Hermaness, Unst

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Introduction

From 18th June to 1st July 1965, D. S. McLusky and I, both of Aberdeen University, were at Hermaness National Nature Reserve, in Unst, Shetland. The primary object was to carry out a census of the Great Skua population, and observe any of its effects on the Arctic Skuas there. Some work was done on other breeding seabirds. A full report has been submitted to the Nature Conservancy, Edinburgh. A similar census of the Great Skuas was made in 1958 by W. J. Eggeling, and his report is in possession of the Nature Conservancy. The present paper deals with numbers and distribution of species, and methods of counting are discussed for future comparison.

The reserve

Unst is the most northerly island of the Shetland group. The Nature Reserve of Hermaness is a peninsula in the extreme northwest of the island, three miles in length and over one mile in breadth. It is separated from another major headland to the east by the Burra Firth, and to the west it faces the open Atlantic. To the north there is an offshore skerry of rocks, the most northerly land in Britain, on which stands the Muckle Flugga lighthouse. These rocks, which form part of the reserve, and on which Gannets and other birds breed, were not visited during this study.

The entire coastline is rocky, with the rock strata dipping strongly to the east. There are therefore no cliffs on the shore of the Burra Firth, but at the north end the coastline becomes indented by steep, narrow geos, and in the west these become interspersed with great rock stacks and cliffs, which rise to over 500 ft. Inland, the reserve is characterised by smooth massive landforms rising to the west, the highest point being Hermaness Hill, 657 ft. Peat covers almost the entire surface, sometimes to great depths, with many pools and bogs. The vegetation consists mainly of grass with sedges and heather, and other bog and maritime plants. Crofters cut peat, and their sheep range freely over the reserve.

Great Skua

The census was made from 19th to 25th June inclusive, with general observations continuing till 30th June. It is thought that the peak hatching date occurred during or just before the census.

The census Eggeling (1958) divided the reserve into eleven areas which could be conveniently covered in a day or less. The divisions were based principally on landforms, boundaries being streams, ditches or fences. To aid comparison, we worked with the same areas, and have used the same reference letters A to K, as shown in fig. 1.

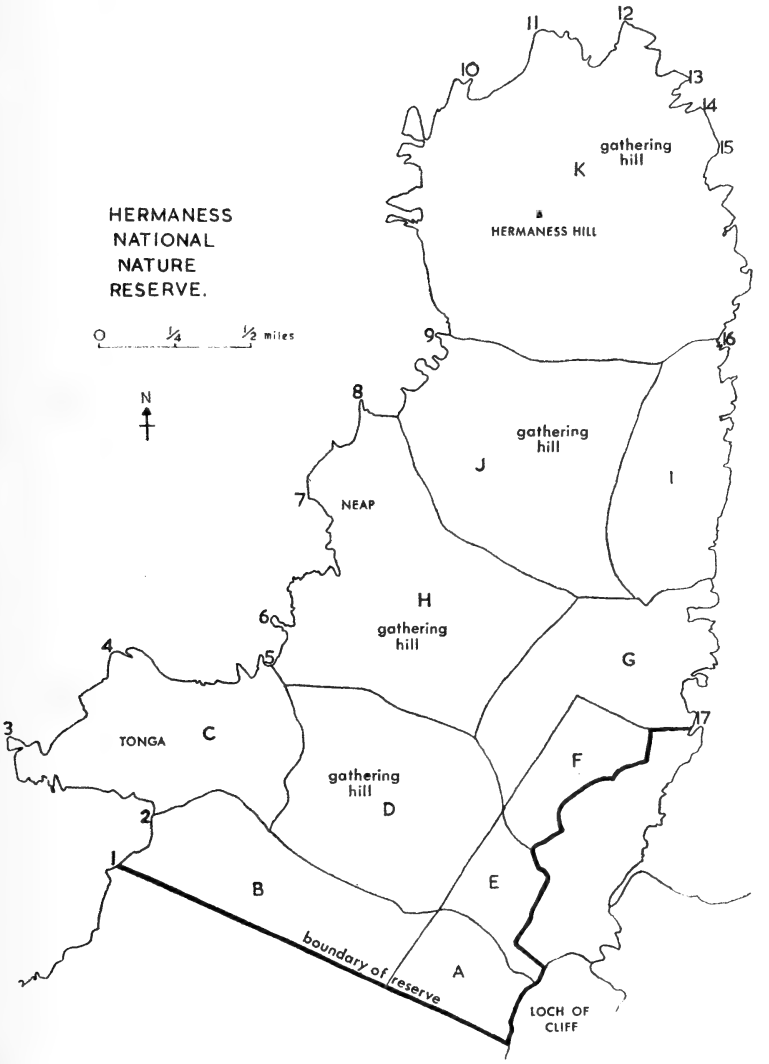

FIG. 1. Map of Hermaness Nature Reserve showing areas of the reserve and sections of the coast used in the census work, and also the Great Skuas' 'gathering hills.'

Each area in turn was traversed systematically by both workers, with the aim of encountering every Great Skua territory. A territory was detected by the behaviour of the occupying birds. With a breeding pair this was normally as follows. Already disturbed and in the air, the pair would direct swoops at the observer whenever he trespassed into the territory. If he then moved in different directions the persistence of attack by the parents increased directly as a nest or chick was neared (chicks wander from the nest from as early as one day old). But this method did not detect all breeding pairs. The aggression of parents increased noticeably about the time of hatching, and intensified as the chicks grew older. Strongest aggression was seen in parents with chicks of about two weeks old (the oldest encountered during the visit), when the observers' heads were hit hard by the parents' trailing feet. Aggression also varied individually. On a few occasions an unhatched (warm) clutch was chanced upon without either parent demonstrating its presence. This could have resulted from the parents being absent, or particularly unaggressive, and it is not known how many other nests may have been missed in this way. Thus breeding pairs were missed from this cause, or from our failing to penetrate territories when we passed close between two of them, or in some other way.

Estimation of numbers of breeding pairs was therefore made by two methods. The first consisted of recording all nests or broods actually located, each nest or brood being marked by a numbered wooden peg to eliminate double counting. The second method was designed to account for all other breeding pairs. The total numbers of birds within each area were counted. From these totals we subtracted the numbers of pairs proved breeding (above method) and the numbers of birds not breeding (see below). The counts thus obtained, of pairs proved breeding and of additional estimated pairs, are given in table 1. Details of all clutches and broods found are given in an appendix.

Up to this point I have dealt only with breeding birds. In any colony birds which do not breed successfully or at all in a given year may belong to any of several categories. Carrick and Dunnet (1954) have defined four such categories —non-breeders, prevented breeders, failed-breeders, and pre-breeders. I follow their definitions here and use 'birds not breeding' for the four categories collectively. It is not known whether 'non-breeders' exist amongst Great Skuas, and 'prevented-breeders' may exist in certain years only.

There were some paired birds holding territories whose behaviour was distinct from that of breeding pairs. Their territories were typically well away from those of other

Table 1. Numbers of breeding Great Skuas at Hermaness

Area	Pairs with nests or broods found	Pairs whose nests or broods were not located	Total breeding pairs
A	0	0	0
B	10	5	15
C	19	7	26
D	14	20	34
E	0	0	0
F	0	0	0
G	2	3	5
H	16	24	40
I	26	5	31
J	20	12	32
K	48	55	103
	155	131	286

Great Skuas (as in areas A and E), in less dense breeding areas (as in B), or at the edge of denser breeding areas (as in I). When their territory was entered by an observer these birds made a few casual dives at the intruder and then retired to watch from an observation mound. Scrapes without nest material were sometimes found and birds were seen to sit in them. It is probable that these birds were pre-breeders, as described by Williamson (1965, p. 77), but they could have included prevented-breeders, failed-breeders or even non-breeders. The numbers counted are given in table 2.

Table 2. Numbers of territory-occupying Great Skuas in late June not breeding

Area	A	B	C	D	E	F	G	H	I	J	K	Total
'Pairs'	1	3	3	0	2	0	4	0	11	0	0	24

A regular feature of the colony was the presence of what Perry (1948) describes as 'gathering hills,' and corresponding to what in other species have been called 'clubs' or 'parliaments' by other authors. These were well-defined, compact, non-territorial areas where numbers of birds congregated singly or in pairs. There were four gathering hills within the reserve, and their positions are shown on fig. 1. Some movement of birds between gathering hills may conceivably occur, and the one in area D was apparently not permanent. As it was occupied when area D was counted (and at other times) it is included here. The numbers counted for the gathering hills in areas D, H, J and K were 16, 80, 41 and 40 birds respectively, giving a total of 177 individuals. The impression gained was that the great majority of these birds were not breeding, perhaps pre-breeders and failed-breeders; but there was also the distinct possibility of the presence of off-duty parents amongst them. A very profitable future

study would be the investigation of the status of birds present at gathering hills, and of territory-holding birds not breeding, by marking birds individually.

There were yet other birds which had to be considered in estimating the size of the colony. The Loch of Cliff (see fig. 1) was regularly used by the colony for bathing. Every day birds were present either on the water or on the banks during daylight hours, numbers declining sharply each evening. All counting was done during the middle hours of the day and the average number present per day at the bathing loch was 60 birds. Finally, Great Skuas could be seen patrolling round the coast each day, and three days' watching gave an average of 24 such birds 'at sea,' assuming that a negligible number was not visible from the shore; in fact very few were seen during arrival and departure voyages.

Summary of results The Great Skua population of Hermaness National Nature Reserve, in late June 1965, may be estimated from the above counts as follows:

1. Breeding pairs counted (table 1):
   with nests or broods located 155)
   estimated additional pairs 131) 286 pairs
2. Territory-occupying birds not breeding (table 2):
   24 'pairs'
3. Counts incorporating several categories of birds:
   at gathering hills 177)
   at Loch of Cliff 60) 261 birds
   'at sea' 24)

Total population as sum of counts: 881 birds

As all counts were minimal:

Probable true population: between 875 and 975 birds, including birds not breeding (guess only): between 250 and 300 birds.

A proportion of the 261 birds in the third group may have been accounted for in the total of pairs with nests or broods located, as occasionally both parents were not present at a nest together. But counteracting this, the total of estimated additional pairs may be too low, owing to the same possible source of error.

Arctic Skua

The behaviour of the Arctic Skuas was such that it was not possible to count them as the Great Skuas were counted. Although aggressive towards the latter, Arctic Skuas seldom attacked either of the observers. When disturbed they usually rose and made wild flights over wide areas, frequently in groups of three or five, and would land again apparently anywhere. Three nests only were found (by chance), all with

unhatched eggs. This, and the birds' behaviour, confirmed that the breeding season was later than the Great Skua's, as Perry (1948) found on Noss.

In the limited time available (patient watching from a distance should have been employed) we were unable to distinguish many pairs, or where breeding occurred. Therefore we counted individuals. As the figures (table 3) show, Arctic Skuas were most numerous in areas E, F, G and the adjacent part of D (fig. 1). These were places where Great Skuas were scarce or absent, and the nearest Great Skuas were not breeding. Small numbers of Arctic Skuas were, however, present in every area of the reserve. In some places a pair was surrounded by breeding Great Skuas and, while no nests were found, the Arctic Skuas vigorously defended the areas from their larger neighbours.

Table 3. Total numbers of Arctic Skuas by areas

A	B	C	D	E	F	G	H	I	J	K	'at sea' (average)	Total
2	4	2	12	22	17	28	6	8	2	4	6	113

Coast-nesting seabirds

The remaining species to be considered are the Fulmar, Gannet, Shag, Kittiwake, Razorbill, Guillemot, Black Guillemot and Puffin. An attempt to establish the approximate numbers and distribution of these species was made on 27th, 28th and 29th June. As the coastline is complex, with cliffs rising to over 500 ft at one point, the accuracy obtainable in assessing numbers was limited.

Counting methods and problems Counts were made from cliff-tops and numerous promontories with the aid of 10x50 binoculars. Little of the coast was completely invisible from the land. The only hidden parts of major importance were the western faces of the large sea stacks on the western coast of area K. That part of the Neap facing northwest was partly invisible. The north-facing cliff beside the number 11 in fig. 1 was not visible, but as no seabird activity was seen around it the number of nests was probably few or none. In addition a large number of minor sections of rock-face were just out of sight (notably parts of the Tonga headland), most of them appearing unsuitable for nesting species except perhaps the Fulmar.

For each species separate counts were made for each of a number of short successive sections of coast. Along with each count an estimate of the margin of error was recorded in the field—a combined measure of the difficulties presented by the species and the particular section of coast concerned. The totals of the counts and the estimated margins of error

Table 4. Number of coast-nesting seabirds at Hermaness in late June 1965

	Reference (fig. 1)	Fulmar	Gannet	Shag	Kittiwake	Razorbill	Guillemot	Black Guillemot	Puffin
West coast of area B	1-2	450±50	0	6	0	0	0	0	1100±300
Goturm's Hole to Tonga Stack	2-3	400±50	0	35	0	100±10	0	0	800±200
Tonga Stack to Grunka Hellier	3-4	700±100	0	20	0	120±10	0	0	1100±400
Grunka Hellier to area D	4-5	400±50	0	40±10	120±10	250±50	1500±300	0	800±300
Area D to Bluescudda Kame	5-6	350±100	0	5	50±20	20	500±200	0	200±50
Bluescudda Kame to 'the point of' the Neap	6-7	900±200	1900±500	10	2000±500	10	2800±700	0	600±200
'Point of' the Neap to Kame of Flouravoug	7-8	220±30	350±100	6	320±50	100±50	900±250	0	800±300
Kame of Flouravoug to Sothers Stack	8-9	300±50	0	5	150±50	10	1300±300	0	800±300
Sothers Stack to Taing of Loosswick (excluding seaward sides of stacks)	9-10	200±50	1200±300	10	650±100	50±10	1300±300	0	1700±500
Loosswick	10-11	180±10	0	30	0	30	0	0	260±50
'Next headland' to the Gord	11-12	500±20	0	0	13	10	380±20	0	120±30
The Gord to the Framd	12-13	300±50	0	4	0	80±10	50±5	0	300±100
The Framd to the Fild	13-14	250±30	0	4	0	0	0	0	80±50
The Fild	14-15	0	0	40	0	0	0	0	0
The Fild to border of areas K & I	15-16	460±50	0	70±5	0	0	0	7	30±10
Coastline of areas I & G	16-17	270±20	0	30	0	0	0	8	0
		5880±860 sites	3450±900 sites	315±15 birds on land	3303±730 sites	780±140 birds on land	8730±2075 birds on land	15 birds offshore	8690±2790 'pairs'

for each species are given in table 4. All place names mentioned can be found on the 1" Ordnance Survey map, but for convenience the limits of each section of coast have been given numbers, identified in table 4 and shown in fig. 1. Each species presented its own particular problems of counting,

Fulmar The number of apparently occupied nest sites was counted. This included many sites containing no egg, perhaps mainly owing to the presence of pre-breeders and failed-breeders, but all categories of birds not breeding could have been represented. The proportion of Fulmars without egg or chick but occcupying sites at colonies is known to be very great in late June. Thus the present census of 'sites' embraces birds breeding and birds not breeding, in unknown proportions.

Gannet The number of 'sites' was counted, as for the Fulmar but with more difficulty. The closely spaced nests made it less readily obvious when a second parent was present, which might have given rise to double counting. There were ledges at the edges of the colonies where birds gathered in 'clubs.' These may well have included off-duty parents and birds not breeding. Neither of these difficulties is thought to have had a great effect on the counts.

Shag This was a very difficult species owing to its behaviour and to the situation of nests. All 'birds on land' were counted. Although many of these were obviously resting before or after fishing, and others were at or near nests, others were not definitely in either situation. A rigid distinction was therefore impossible. It is doubtful if these figures are very meaningful, but they are given as they may indicate to which part of the coast the birds were attached, and to give a guide to total numbers. Very few birds not in breeding plumage were seen, and nests were seen at Taing of Loosswick and on the north and east coasts of area K.

Kittiwake As with the Fulmar and Gannet, 'sites' were counted. These were readily distinguished whether or not one or both parents were present. It is possible that the figures represent breeding pairs almost exclusively. No suggestion of 'clubs' was noted.

Razorbill and Guillemot These two species were treated in the same manner. The method applied was the only one possible, consisting of counting all birds seen on land. Distinguishing members of pairs amongst the tightly packed individuals was quite impossible, and there was also no way of discovering what proportion of birds was on the breeding ledges or on the sea. As the state of the weather

may have an effect on these proportions it may be worth recording that a strong west wind of about Beaufort force 7 was blowing at the time of counting.

Black Guillemot This is the only species considered here which was not proved to be breeding. The birds seen were swimming just offshore, usually singly, and no time was available for further investigations. But as it is probable that breeding occurred, numbers of 'birds offshore' are given.

Puffin This was the most problematic species to count, and no proper method was established. Although very many Puffins were on land at or in their burrows or resting elsewhere, there was at the same time a vast number both swimming and flying. There was a constant passage of birds between sea and burrow. The counts actually recorded were of 'pairs,' but were arrived at largely by impression. By observing a small area with burrows, and noting the arrivals and departures of birds over a short period, an indication was obtained of the number of pairs represented by the number of birds visible at a single time. This had to be a flexible method where, for instance, birds were obviously merely perched on convenient places unrelated to any burrows. Owing to the great difficulties presented by this species the estimated margins of error were greater than for others.

Conclusion

The increase in size of the Great Skua colony at Hermaness during this century, from a very few pairs present throughout the 19th century, is traced by the Venables (1955). The most recent estimate given is their own—300-350 pairs including 'many' birds not breeding, in 1949, in the reserve and the adjacent land 'south to opposite the Loch of Watlee.' In 1958 the population in the reserve alone was estimated to be 340 breeding pairs, or 900-1000 birds altogether, including not more than 200-300 birds not breeding (Eggeling 1958). Between 1958 and 1965 the numbers are believed to have risen slightly and fallen again (Miss N. J. Gordon, pers. comm.). But the results of the present census are strikingly similar to those of 1958, and the methods used are closely comparable. It could thus be inferred that any change over the period 1958-65 has been insignificant, and that the population within the reserve has, in effect, recently remained constant.

The numbers of Arctic Skuas cannot be traced with any accuracy. Seton Gordon states that in 1937 there were 'at least 100 pairs' (Baxter & Rintoul 1953), and the species is said to have 'decreased within living memory' (Venables 1955) at Hermaness. No proper census was made in 1958, but the population of the reserve was then judged to be 50-75

pairs (Eggeling 1958). It has been widely assumed that the decline of the Arctic Skua, in places where the Great Skua has become established, is a direct result of the increase of the latter. The present census suggests that the number of Arctic Skuas at Hermaness has decreased only slightly, if at all, since 1958, and it is thus possible that the species is now holding its own against the Great Skua. This may or may not be due to a recent stabilisation of the Great Skua population.

I know of no relevant recorded information on the coast-nesting seabirds of Hermaness, except for the Fulmar and Gannet. The Fulmar was first proved to breed there in 1897, and estimates for 1939, 1944 and 1949 are *c.* 1000, *c.* 1500, and *c.* 2000 'sites' respectively (Fisher 1952). The time of year when these estimates were made is unfortunately not specified, but it can safely be said that the present estimate shows a substantial increase in numbers since 1949. Gannets were not known to breed at Hermaness until a 'few pairs' bred in 1917. A 'count from land' in 1938 gave 1581 pairs (but a full count including all the stacks gave 2045 pairs), and an 'estimate from land' in 1949 gave 3150 pairs (Venables 1955). The present estimate, which was similarly made from land, indicates that the rate of increase has been considerably reduced.

However, the relative distributions of the coast-nesting species revealed by this work are likely to be of more precise value than the numerical estimates. The composition of seabird colonies may always be in a state of change, and the Gannet and Fulmar have certainly spread recently at Hermaness, possibly at the expense of some other species. Competition between any of the species discussed is poorly understood. It is hoped that others will continue seabird studies at Hermaness, and compare their findings with those recorded here.

Acknowledgments

My first thanks are due to my companion, Donald S. McLusky, without whom this work would never have been accomplished. Financial assistance was kindly given by the Nature Conservancy. I am grateful to Dr W. J. Eggeling and Dr G. M. Dunnet for advice, and in particular to A. Anderson for valuable criticism of earlier drafts.

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Appendix

Clutches and broods of Great Skuas at Hermaness in late June 1965

155 separate nests or broods were found

Date found	Area	Nests empty or with eggshell only	1 egg	2 eggs	1 egg and 1 chick	1 chick	2 chicks
20th	I	3	4	6	4	7	2
20th	G	0	1	0	0	0	1
21st	J	1	1	8	4	5	1
22nd	B	1	1	1	3	2	2
22nd	C	5	3	8	0	3	0
24th	K	8	4	9	7	15	6
25th	D	1	2	4	0	4	3
25th	H	0	2	4	0	4	5
		19	18	40	18	40	20

Notes 1. Eggshell indicates either hatched or destroyed eggs.
2. A bias exists towards finding one chick rather than two chicks.

Isle of May Bird Observatory and Field Station Report for 1966

Prepared for the Observatory Committee by
NANCY J. GORDON, *Honorary Secretary*

The Observatory was manned for a total of 202 days between 2nd April and 25th November 1966 and was officially closed down for the season rather later than usual—7th January 1967. The number of observer nights was 670.

The spring migration was fairly normal, but some was missed during a gap in mid April. For the first time for many years the Low Light was occupied almost continuously throughout the summer months, mainly by the Durham University team carrying out research on the gulls; this provided a valuable continuity of observation. Apart from a gap in mid August, the autumn migration was entirely covered and the several sizeable falls in late August and the first half of October included a good crop of rarities. Thanks mainly to Miss Winifred Flower, who volunteered to keep the observatory open much later than usual, much useful in-

formation has been obtained on late autumn and winter movements on the island.

No new species were recorded in 1966, but the rarities included Firecrest, Aquatic Warbler, Red-headed Bunting and Yellow-breasted Bunting (see below).

Two species ringed for the first time were seven Dunlin on 1st-2nd September and a Waxwing on 24th October.

Spring migration

Observers were on the island 2nd-13th, 21st-28th April, and 6th May-11th June.

April. For the first half of the month winds were consistently east, but there was no more than a small trickle of migrants until the visibility deteriorated overnight on 5th/6th, bringing in many birds—the first Chiffchaffs (10 or more), 2 very early Blackcaps, one common and 4 Black Redstarts, about 40 Wheatears, a Stonechat, 5 Ring Ouzels, 35 Goldcrests, 3 Bramblings, 3 Redwings, 15 Fieldfares, 4 Song Thrushes, 2 Mistle Thrushes and 20 Blackbirds. Similar movements continued during the next six days, when fog and mist accompanied the east winds. On the 7th the number of Goldcrests increased to 80, Ring Ouzels to 8, Black Redstarts to 6, and the first Willow Warbler arrived. Over the next few days numbers of Goldcrests and warblers diminished, Wheatears (up to 20 daily) and Meadow Pipits (up to 35) were passing through, and numbers of other species increased to a climax on the 10th with an influx of 200 Robins, 150 Song Thrushes, 60 Bramblings, 40 Fieldfares, 10 Ring Ouzels, a Green Sandpiper and a Woodcock, most of which appeared very tired and remained on the island for several days. Observers returning to the island on the 21st found quite a heavy population of migrants—more than 100 Blackbirds, 200 Robins and 150 Song Thrushes—but most of these departed when the wind swung to the west on the 24th. From then until the 28th there was a small trickle of warblers including the first Sedge Warbler and Whitethroats. Up to 20 Dunnocks passed through each day, but very few waders, and few Wheatears until the 27th when about 30 arrived, despite a strong SW wind, with 18 Fieldfares, 5 Redpolls, a Cuckoo, a Whinchat, 7 Redstarts, a Swift and 6 House Martins (the first Swallow had arrived on the 22nd, the first Sand Martin on the 23rd). Few Linnets were seen. Apart from a Peregrine on the 25th, perhaps the most interesting bird of the week was a Dipper on the 22nd, correctly described by the writer of the Daily Log as "only the second recorded since the Boer War"!

May-June. There were east winds and rain between 7th and 12th May, but only small numbers of migrants—a Lesser

Whitethroat and 30 Dunlin on the 7th, a few Blackbirds, Redwings and Redstarts on the 8th; a few warblers arrived overnight on 8th/9th and on 10th/11th, followed by a slight build-up of hirundine passage over the next few days. The season's first Garden Warbler came on the 12th, the first Spotted Flycatcher on the 13th.

The 14th was the start of a 12-day spell of mainly west winds, but was not without interest—a trickle of hirundines, a common and a Black Redstart, a White and a Yellow Wagtail and an Osprey. The small passage of terns started on the 10th and continued all month, mainly 'Comic' (up to 30 daily) and Sandwich (up to 18 daily), with 3 Roseate Terns and one Little Tern on the 17th. Up to 5 Manx Shearwaters were seen daily between the 17th and 20th. The 16th and 17th saw a small influx of warblers after a short spell of east winds, and also one Merlin, a Cuckoo and a Turtle Dove. Two spells of east winds on the 21st and 24th each brought some warblers, the second date 35 Willow Warblers, 12 Sedge Warblers and 6 Whitethroats overnight. An uncommon visitor on the 26th was a Corn Bunting, only the seventh record for the island. Despite east winds the only species of interest during the last few days of May was a Collared Dove which arrived at 1700 hrs on the 31st.

June started with fine weather and west winds and a few late warblers, notably a Chiffchaff on the 1st, single Whitethroats on the 4th and 11th, and 2 Sedge Warblers on the 4th. A very late Brambling arrived on the 1st in company with the only Tree Sparrow seen in 1966. Other late stragglers were a Robin on the 7th and a Greenfinch on the 11th (only two others were seen during the year). A typical June fog blanketed the island, off and on, from 7th to 10th June, the only arrivals being a Willow Warbler and a stray House Sparrow on the 10th.

Summer

From mid June to the end of July, observers were concentrating on studies of the breeding populations, but a few late oddments turned up, notably 2 Long-eared Owls on the 16th and a Chiffchaff, Redstart and Turtle Dove on 17th June after SE wind and fog. The rest of the month, and July, were mainly fine and sunny. July produced a Greenshank and a Green Sandpiper on the 4th, a young Cuckoo on the 8th, and saw the arrival of Purple Sandpipers, 6 on the 13th rising to 35 by the 15th. A Great Skua was seen on the 19th.

Autumn

Observers were in residence from 30th July to 7th August and from 19th August to 25th November.

August. After several days of NW winds the first sign of movement after a change to east winds and rain on the 3rd was a single Willow Warbler, followed by two more on the 4th with a Wood Warbler and a few Wheatears. In spite of a change of wind to NW that evening, the first Garden Warbler, Swift and Pied Flycatcher of the autumn arrived on the 5th. Observers returned to the island on the 19th to find that some migration was in progress, with Wheatears passing, and 7 Pied Flycatchers, 25 Willow Warblers, and a Whimbrel already on the island. The next influx was on the 21st when with east winds and mist Wheatears trickled through all day with a few Willow Warblers, and in late afternoon 3 Pied Flycatchers, 2 Garden Warblers and a Barred Warbler. Other arrivals were 18 Curlews, a Green Sandpiper, a Common Sandpiper and 2 Teal.

For the next three days winds were mainly west and little movement was recorded; then it was east winds until the end of the month and ideal weather for seeing migrants. The movements started overnight on 24th/25th with 15 Pied Flycatchers, a Barred Warbler and a Scarlet Grosbeak (the earliest yet recorded), followed by a few Swallows, Willow Warblers and Wheatears during the next day. There was similar movement on the 26th, with the addition of 5 Whinchats, a Redstart, a Red-backed Shrike and the first Whitethroat of the autumn; and again on the 27th, with a Green Sandpiper, 3 Whimbrels, 9 Sandwich Terns, 25 Whinchats, 10 Garden Warblers, a Lesser Whitethroat and a Tree Pipit. Most of these migrants had gone by early morning on the 28th, but that day, with east winds and hazy spells, turned into the best day of the year for variety of migrants. With the Redstarts (15), Whinchats (30), Willow Warblers (20), Garden Warblers (10) and Pied Flycatchers (50) came 2 Barred and 2 Icterine Warblers, an Aquatic Warbler, 2 Spotted Flycatchers, a Red-breasted Flycatcher, a Blue-headed Wagtail, 9 Crossbills, a Yellow-breasted Bunting, 5 Whimbrels, a Green Sandpiper, 2 Common Sandpipers and a Greenshank. There was further passage next day, and several species reached maximum numbers—Pied Flycatcher (150), Garden Warbler (50) and Willow Warbler (40). Additions were the first Blackcap of the autumn, 5 Tree Pipits, a "flava" Wagtail and an Ortolan Bunting. On the 30th thick fog inhibited visible migration, but newcomers included 5 Lesser Whitethroats, a Red-headed Bunting, 30 Dunlin and 4 Golden Plovers. As the weather cleared and the wind dropped on the 31st there arrived 2 Red-backed Shrikes, 3 Wrynecks, a Wood Warbler and a Nightingale—a fitting postscript to an exciting spell of migration.

September. The first day of the month started with east

winds and the tail end of the late-August influx (plus one Cuckoo), but for the next two weeks winds remained inexorably and unutterably west. However, there was a good deal of coastal movement—Swallows, Skylarks, Wheatears, pipits and a few 'Comic' and Sandwich Terns, also a Spotted Redshank on the 2nd. This movement reached a maximum on the 3rd with 500 Swallows and 1200 Meadow Pipits, but dwindled over the next few days as the wind strengthened. The first Goldcrest of the autumn arrived on the 4th, but without a change of wind, and about 10 Willow Warblers and a Sedge Warbler came in on the 7th. The first 2 Song Thrushes were seen on the 9th with a few more Goldcrests and the first Chiffchaff of the autumn. After this there was only small local movement (including several Kestrels) until two days of SE wind brought in 9 Pied Flycatchers 4 Whinchats, 25 Goldcrests, a Long-eared Owl, 3 Garden Warblers, a White Wagtail and a Redstart on the 18th. The autumn's first Snow Bunting was seen this day too. The wind returned to the west for the next six days and apart from local pipit and hirundine passage (50 Sand Martins on the 20th) the only arrivals were the odd Golden Plover and Dunlin, a Common Sandpiper, and on the 22nd the season's first Brambling. A Merlin was seen on the 24th, as if to herald a change in the weather; there followed several days of east winds, bringing the autumn's first Fieldfare, 2 Redwing, 20 Pied Wagtails, a Treecreeper, a Whimbrel and 10 Brambling by the evening of the 25th, and the next day a Garden Warbler, a Chiffchaff, a Reed Bunting and more Brambling. Several flocks of Redwings and Fieldfares came in on the 27th, 25 Canada Geese flew past Kirkhaven, and a Bluethroat was seen. The 28th was calm and misty, and observers were rewarded during the day with 12 Siskins, a Lesser Whitethroat, a Yellow-browed Warbler, 2 Redstarts, a Peregrine and the first autumn Chaffinches. Next day saw a slight change in the pattern of migration, with the first sign of Blackbird movement, accompanied by 2 Ring Ouzels, 2 Short-eared Owls, a Whitethroat and the year's second Scarlet Grosbeak. The last of the spell of east winds yielded a Grasshopper Warbler on the 30th; the same day an Arctic Skua, a Golden Plover and a Whimbrel were seen.

October. Before the wind backed SW on the 1st a number of thrushes arrived—200 Redwings, 40 Song Thrushes, 40 Blackbirds and also 40 Goldcrests. Only local movement was recorded in the clear weather that followed, with a Greenshank on the 2nd, the last Whimbrel on the 3rd, a few Pied Flycatchers and Goldcrests on the 5th, when a Long-tailed Duck and the last tern of the season were also seen. After an overnight easterly gale there was sudden calm and mist

on the 6th and heavy arrival and movement of turdidae (about 1500 passing per hour all morning) and Bramblings (about 500 per hour). The totals estimated were 3000 each of Song Thrushes, Redwings and Blackbirds, 200 Fieldfares and 20 Ring Ouzels. With them came 2 Woodcock, 48 Lapwing, a Jack Snipe, a Turtle Dove, 2 Whinchats, 20 Redstarts, 2 Garden Warblers, a Lesser Whitethroat, 6 Chiffchaffs, 3 Pied Flycatchers, a Great Grey Shrike, 50 Chaffinches and 3 Reed Buntings. Smaller numbers of the same species were moving during the next few days, newcomers being 20 Dunnocks, 15 Siskins, 5 Corn Buntings and a Firecrest on the 7th, and a Red-throated Diver, a Great Skua and a Tree Pipit on the 8th. With continuing easterly winds there was another huge movement of turdidae from dawn until noon on the 10th, and flocks of 20 to 50 Fieldfares, Redwings, Blackbirds, Song Thrushes coming in from the east every few minutes, some alighting, many continuing towards the Lothians. Bramblings were also migrating, and other arrivals were a Red-breasted Flycatcher, a Bluethroat, a Sparrowhawk, a Great Grey Shrike, Chiffchaffs, Redstarts, Goldcrests, Robins and a Blackcap. Numbers of turdidae dwindled over the next two days, but there were more Siskins, Chaffinches and Robins. More mist on the 13th brought a fresh influx of turdidae, especially Blackbirds, also Goldcrests, Redstarts and Robins, 5 Great Grey Shrikes, 2 Black Redstarts and 2 Barred Warblers. There were still thousands of birds on the island on the 14th, plus a large number of Starlings and many more Robins. Most of the migrants passed on during the next few days, only a few species increasing in number (Chiffchaffs to 200 on the 15th, Blackcaps to 10 on the 16th). There was a small passage of Starlings and Skylarks on the 16th, but few new arrivals until the 19th—40 Bramblings, a late Spotted Flycatcher and one Red-breasted Flycatcher, 2 Redstarts and a Water Rail. This day marked the end of a long spell of east winds and visible migration, and the wind blew from the northwest for the rest of the month. The only significant arrivals were 250 Blackbirds, a Woodcock and a Waxwing on the 24th, a Long-eared Owl on the 25th, a Bar-tailed Godwit on the 26th, and 70 Blackbirds, 200 Starlings and a Barred Warbler on the 28th.

November. There was very little visible migration during November, with strong, mainly west, winds and good visibility. There were small movements of Blackbirds and thrushes on the 2nd, 3rd, 10th and 11th, accompanied by the odd Bramblings and Snow Buntings. Other arrivals were 2 Northern Chiffchaffs on the 3rd, single Blackcaps on the 5th and 7th, a late Dunlin on the 7th, another Chiffchaff on the 8th, a Greenfinch on the 9th, and then nothing until a short spell

of east winds bringing about 24 Blackbirds, 2 Redwings, and a Robin on the 19th; and on the 20th 8 Fieldfares, 3 Redwings, 20 more Blackbirds and a Blackcap. Despite the return to west winds there was another very similar small movement on the 23rd, including a late Blackcap.

Winter

Because of the rarity of winter observers it is worth recording that at the closing of the Observatory on 7th January 1967 there were 5 Blackbirds, 1 Song Thrush, 3 Redwings, 1 Fieldfare, 2 Short-eared Owls, 1 Dunnock and 2 Wrens present on the island, and a Black Guillemot and a Little Auk offshore.

Unusual occurrences

Velvet Scoter One, 17th May. First spring or summer record.
Canada Goose Twenty-five, 17th September. Fourth record.
Mute Swan Two, 26th September; one, 25th-30th October. Only second record.
Osprey One, 14th May. Seventh record.
Greenshank One, 4th July. First July record, and earliest by a month.
Little Tern One, 17th May; four, 7th June. First spring records.
Turtle Dove One, 6th October. Latest record.
Collared Dove One each, 31st May, 3rd June. Third year of occurrence.
Dipper One, 22nd April. Sixth record (only the second this century).
Nightingale One, 31st August. Eighth year of occurrence.
Bluethroat One, 10th October. A late record. Red-spotted.
Aquatic Warbler One, 28th-30th August. Fifth record.
Blackcap Two, 6th April. Earliest spring record.
Barred Warbler One, 28th October. Latest autumn record.
Chiffchaff Two, 11th November. Latest autumn record. "Northern."
Firecrest One, 7th October. Third record.
Spotted Flycatcher One, 19th-20th October. Latest autumn record.
Pied Flycatcher 150, 29th August. Largest number in one day.
Red-breasted Flycatcher One, 28th August. Earliest autumn record.
Great Grey Shrike Five, 13th October. Highest number in one day.
Scarlet Grosbeak One, 25th-27th August. Earliest autumn record.
Brambling One, 1st-2nd June. Latest spring record.
Red-headed Bunting One, 30th August-2nd September. Second record.
Yellow-breasted Bunting One, 28th August and 2nd September. Fifth record.

Breeding populations

In his count of Shag nests in June, Dick Potts reached a total of 709, slightly fewer than in his 1965 count. The breeding birds include a number ringed as pulli on the Farne Islands. No estimate of Puffin numbers was made, but several observers reported an increase, and noticed a spread of the nesting area towards the Low Light. Fulmar numbers remain steady at about 30 pairs, and 10 young were reared. Between 100 and 200 pairs of Eider Duck were present during the breeding season and many attempted to nest; as usual hatching success was limited by gull (and human) disturbance. Great Black-backed Gulls bred for the fifth succes-

sive year—this time at least two pairs (one bird wearing a ring); two young were ringed. A three-year study of the Herring and Lesser Black-backed Gull breeding colonies was started in 1966 by two members of Durham University, who spent the whole of July on the island and ringed a large number of pulli. They estimated there to be about 7000 pairs of Herring Gulls and 900 pairs of Lesser Black-backed Gulls. In June, John Coulson estimated 2143 pairs of Kittiwakes—an increase of 500 pairs on his 1959 count. About 15 pairs of Oystercatchers nested; and of the smaller birds a pair of Swallows reared two young, a pair of Dunnocks reared four young by the Low Trap, and at least two pairs of Pied Wagtails nested successfully, the first time for five years, and four young were reared.

Ringing and recoveries

6877 birds of 58 species were ringed. This impressive record annual total (several thousand more than the previous highest) was due mainly to the large-scale ringing of gulls—4413 Herring and 183 Lesser Black-backed—by Durham University. But apart from this there was more ringing activity than usual, especially during the heavy autumn migration. Record totals for the year were Razorbill (12), Puffin (87), Wren (51), Chiffchaff (34), Icterine Warbler (4), Goldcrest (138), Pied Flycatcher (86) and Great Grey Shrike (5). Other high totals were Brambling (99), Chaffinch (75), Ring Ouzel (8), Robin (273), Blackcap (43), Barred Warbler (9) and Siskin (15). Apart from the Dunlin and Waxwing, unusual birds ringed included 2 Scarlet Grosbeaks, a Kestrel, a Water Rail, an Aquatic Warbler and a Yellow-breasted Bunting. Low totals were Whitethroats (42) and Rock Pipits (21), and no Linnets or Greenfinches were ringed. Fewer Shags (210) were ringed than in 1965.

The list of recoveries totals 109, and includes 33 Shags. Recoveries of the 1966-ringed Herring Gulls have been coming in fairly steadily, and of the 42 so far reported, there were 17 from the Fife coast (where there have also been sightings of colour-ringed birds), 8 from the Lothians, and the rest further afield in Northumberland, Ayr, Dumfries, Essex and Ireland. In addition there were 379 recoveries of dead unfledged birds.

The following recoveries from abroad include the island's first Chiffchaff recovery.

		Ringed	Recovered	
Lesser Black-backed Gull	Ad.	26. 4.66	Vizcaya, Spain	20.10.66
Lesser Black-backed Gull	Pull.	24. 7.66	Plomeur, Finisterre, France	30.10.66
Lesser Black-backed Gull	Pull.	27. 7.66	Agadir, Morocco	30.11.66

Fieldfare	Ad♀	27.10.63	Oise, France	11.12.66
Song Thrush	1st W	7.10.65	Moissac, Tarne-et-Garonne, France	end 11.65
Song Thrush	1st W	2.10.65	Meschers, Charante Maritime, France	15. 1.66
Song Thrush	1st W	2.10.65	Bazas, Gironde, France	12.12.65
Ring Ouzel	Ad♀	3.10.65	Campan, Hautes-Pyrénées, France	7.11.65
Blackbird	Ad♂	1.11.63	Stokka, Sandnes, Norway	26.3.66
Blackbird	1stW♂	21.10.64	Fjelberg, Hordaland, Norway	26. 3.66
Blackbird	Ad♀	26.10.63	Lillesand, Norway	20. 4.66
Blackbird	Ad♀	28.10.64	Visseltofta, Osby, Sweden	21. 4.66
Blackbird	Ad♀	3. 4.65	Valle, Aust Agder, Norway	18. 4.66
Blackbird	1stW♀	21. 4.66	Röfors, Laxa, Sweden	6.10.66
Blackbird	FG	6.11.62	Isoroyhis, Ikaalinen, Finland	—. 8.66
Redstart	1stW♀	25. 9.65	Zanzur, nr. Tripoli, Libya	6. 4.66
Robin	FG	29. 4.65	Benaria, Orleansville, Algeria	12. 2.66
Garden Warbler	FG	13. 8.65	Biarritz, France	25. 4.66
Willow Warbler	FG	9. 3.66	Cadima, Cantanhede, Portugal	7. 9.66
Chiffchaff	1st W	9.10.65	Trapani, Sicily	22. 3.66
Spotted Flycatcher	1st W	4. 9.66	Amou, Landes, France	20. 9.66

Interesting recoveries of birds ringed elsewhere included a Greenfinch caught on 23.4.66 (ringed Alnwick, 23.9.60), and two Puffins, ringed as pulli on the Farnes in 1960 and 1961, the first confirmation of the suspected origin of the new large breeding colony on the May.

Other observations

Rabbits are once again very numerous, and there is no sign of the myxomatosis which nearly wiped out the population in 1964.

No change in the grey seal population has been observed, groups of up to 50 frequenting the shores throughout the year; no pups were born.

Malcolm Smith of the Nature Conservancy spent a week on the island in August collecting insects. In two visits he has added 71 species to the island's list of Coleoptera (which now stands at 169 species) and verified a 60-year-old record of one species by a chance discovery at the bottom of a corn-bin in the tomato shed!

The island's geology came under some scrutiny in April when staff of the Geological Survey came to investigate the possibility of using island water for the lighthouse instead of imported water. One of them, R. A. Eden, returned in summer with a group of divers to search (off the east shore) for the junction between the island's volcanic rock and surroun-

ding sedimentary rocks. Among the several submerged wrecks encountered was the remains of the *Island*, identified by the crockery on board, which matched that salvaged in 1937 for the Low Light.

Thanks to the lighthouse keepers, the Bain Trap was almost completely rebuilt in the summer. The Committee is most grateful to the Principal Keeper and his staff for all the other help given to the Observatory during the season.

The Rock Dove in Scotland in 1965

RAYMOND HEWSON

Introduction

It seems clear from various authors that the Rock Dove *Columba livia* is less widespread in Britain than formerly (see *e.g.* Ritchie 1920; Witherby *et al.* 1940). This paper is an attempt to define the distribution of Rock Doves in Scotland in such a way that future comparisons can be made and changes detected. It is based on replies to questionnaires sent out from 1963 onwards and on other information.

Derek Goodwin (*in litt.*) has pointed out that even good ornithologists may not be competent to distinguish between a 'blue' feral pigeon (*i.e.* one with plumage resembling that of a Rock Dove) and a Rock Dove. He provided the following criteria for distinguishing Rock Doves from feral pigeons: his categories are listed here to assist ornithologists who may wish to make a more detailed study:

1. All pigeons in the area are blue-grey with two black wing bars (some birds with traces of a third) and with white lower back and white underwing. All appear to be the same size and shape and if flying as a flock maintain the same speed. At close quarters the slender bill and small cere can be seen. Females show less irridescence on the neck than males; unmoulted juvenile females show none. Males show uniform irridescence, clearly visible at close quarters. Orbital skin is blue-grey and narrow, not contrasting with surrounding feathers.

2. As above but a few (proportion to be stated) of chequered (black-spotted wing coverts) or velvet (blackish wing coverts) pigeons among them.

3. Birds of varying colours but blues and chequers predominating and the majority of fairly uniform Rock Dove size and shape.

4. Birds of varying colours and with considerable diversity of size and shape, many having proportionately thicker bills, larger ceres and more extensive orbital skin than Rock Doves.

The presence of a few obviously lost racing pigeons during the racing season (May to September) should not be taken into account in determining the above categories. It should be noted in case of future significance.

It could be assumed that pigeons in category 1 are probably pure or nearly pure Rock Doves; in category 2 they are probably largely, possibly all, pure Rock Doves. Category 3 represents a mixed population probably derived largely from dovecote pigeons and/or Rock Doves; while category 4 is a feral population probably derived partly from racing pigeons and other domestic breeds.

It was clear that a large-scale enquiry employing such critical standards was unlikely to succeed, but Mr Goodwin agreed that where 80% or more of the pigeons living wild in any coastal area were blue with two black wing bars and pure white lower back contrasting with blue-grey rump and white underwing, then the population could be regarded as largely or entirely Rock Doves. A simple questionnaire was compiled asking for details of location, the number of pigeons with white rump and two distinct black wing bars and the number of other pigeons. Where the proportion of apparent Rock Doves was three-quarters or more the birds were taken to be mainly Rock Doves; where the proportion was less they have been regarded as feral pigeons or as mixed flocks which could not safely be allocated to one form or the other. The 'blue' type of feral pigeon, which resembles the Rock Dove, is common in urban flocks.

Results

Forty questionnaires were returned for mainland coastal areas and 21 for islands; other information, often detailed, was included in letters and lists. No information was received for Dumfries, Kirkcudbright and Wigtown in the west, or from Easter Ross, Kincardine and Berwick in the east. A representative selection of islands was covered and recent information on islands not shown in table 2 can probably be obtained from lists of birds seen there by visiting parties. Where such lists have been readily available I have included them and have indicated the source.

The data from mainland returns have been summarised for each county in table 1. If a coastal pigeon flock can be considered to be Rock Doves when three-quarters of its members show Rock Dove colouration, the Rock Dove was restricted on the mainland to the east coast from Easter Ross or east Sutherland northwards, the north coast of Caithness and Sutherland and the west coast from Bute or Argyll northwards. No recent information was available from Easter Ross and the evidence that Rock Doves occur

there was obtained from the Rev. J. Lees's study of breeding in 1944-45 (Lees 1946). There was however a mixed (assumed to be feral) flock at the Mound in east Sutherland. A questionnaire referring to the Angus coastline between Lunan Bay and Arbroath mentioned isolated groups of Rock Doves (whose status would need to be examined in the light of Goodwin's classification) along a coastline principally inhabited by feral pigeons. Along part of the same coast a second observer found a higher proportion of feral pigeons near Arbroath than further north.

The distribution of Rock Doves in the islands was more straightforward. While 'lost' racing pigeons and other domestic pigeons occurred, the coastal population consisted almost entirely of Rock Doves, from Islay in the south to Shetland in the north. Petersen and Williamson (1949) found an average of 50-60 pairs of Rock Doves on the Faeroese island of Nolsoy, at the northwestern limit of its range, and this colony contained birds showing a chequered wing pattern as well as those of the more usual plumage type.

There was evidence of Rock Dove migration from Fair Isle, with a breeding population of about 10 pairs (March to November), obvious southward passage in autumn, and few or no Rock Doves in winter (P. E. Davis *in litt.*); and also from Rhum, with over 200 Rock Doves in November 1959 and 100 in October 1960, compared with a breeding population of about 15 pairs (P. Wormell *in litt.*).

Discussion

The Rock Dove is widely distributed along the coasts of Europe from the Faeroes to Spain and Portugal. It occurs also along the north coast of the Mediterranean and in North Africa, and along the coasts of Asia Minor, the Black Sea, Sea of Azov, Caspian and Aral Seas. Other forms of the species occur in the Canaries, West Africa, the Sahara, Libyan desert, Nile valley, Red Sea, east Mediterranean, Palestine, Turkestan and Baluchistan to India and Ceylon (Witherby *et al.* 1940). A sibling species, the Blue Hill Pigeon *C. rupestris,* replaces the Rock Dove in the higher and colder parts of central and east Asia (Goodwin 1959).

The Rock Dove's maritime habitat may mitigate the effects of severe weather on a not particularly hardy species, although Peterson and Williamson (1949) found that many Rock Doves died in the Faroes in the hard winters of 1945 and 1946/47. In its feral state the species endures severe winters—*e.g.* in Moscow, Iceland and Finland (Goodwin *in litt.*)

The Rock Dove seems to be at least partially dependent on cultivation for its food. Goodwin (*in litt.*) suggested that

the 'heathy brows' referred to as part of the Rock Dove's foraging range in the *Handbook* might be sources not of food but of nesting material. The same work suggested a greater dependence on seeds and Mollusca, in the partial absence of cultivation, than was the case with the Woodpigeon *C. palumbus* or Stock Dove *C. oenas*. Petersen and Williamson (1949) found in the Rock Dove's diet in the Faeroes barley and potatoes, seeds of *Plantago, Brassica* and *Rumex* in summer, and seeds of *Rumex* from December to March. Fallow ground was preferred to grassland because of weeds, especially sorrel *Rumex acetosa*.

Dependence upon cultivation would explain the presence of about 70 Rock Doves upon the small highly cultivated island of North Ronaldsay (with few nesting cliffs) compared with 20-40 on each of the rather larger cliff-girt islands of Rhum, Fair Isle and Foula or about 4 pairs on the island of Handa. It would also explain, as suggested by Williamson and Boyd (1960), the absence of Rock Doves from St Kilda since its evacuation.

Murton and Westwood (1966) have shown that the Rock Dove has the same food requirements as the Stock Dove and consider that inter-specific competition could be expected in areas of overlap. But in northern and northeastern Scotland at least, the Stock Dove, after rapid expansion (Harvie-Brown and Buckley 1895), is no longer a common bird, and it has certainly decreased in numbers in Banff and Moray during recent years. In Ireland the Rock Dove appears still to be widely distributed (Kennedy, Ruttledge & Scroope 1954), while the Stock Dove may still be increasing its range. It is possible that different agricultural practices are responsible for this state of affairs in Ireland and that recent changes in agricultural methods in general are unfavourable to both Rock Dove and Stock Dove in England and Scotland. In Banff, and probably also in Easter Ross, Sutherland and Caithness (and perhaps elsewhere throughout the area apparently now occupied by Rock Doves) the agricultural land along the coast is normally treeless and exposed. It is not a suitable habitat for Stock Doves, although they continued to nest in sand dunes along the Moray coast until the 1930s (R. Richter pers. comm.), and competition for food between Rock Dove and Stock Dove is unlikely to occur, particularly as the Stock Dove has never seriously encroached upon the main strongholds of the Rock Dove indicated by the present enquiry.

Competition for food between Rock Doves and feral pigeons must however have occurred throughout several centuries, and the original dovecote pigeon may have been so similar to the Rock Dove that interbreeding occurred. Dove-

cote pigeons, numerous from the 15th to the 18th centuries, were expected to forage for themselves throughout most of the year and were fed only at those seasons when they found it difficult to sustain themselves (Smith 1931). Prior to the agricultural improvements which began in the 18th century corn was harvested much later in Scotland, and arable land was abandoned to revert to coarse grazing, producing in the process a great quantity of weed seeds (Handley 1953). The food available for pigeons would therefore be somewhat different from that of modern times. As the distribution of dovecotes was mainly coastal (Ritchie 1920, and personal observation) these feral pigeons, far outnumbering Stock Doves and Woodpigeons, would have been feeding on the same ground as Rock Doves. The much quoted estimate of 36,000 pairs of dovecote pigeons in Fife in the 18th century (Thomson 1800) assumed an average of 100 pairs of pigeons per dovecote. About 120 dovecotes remaining in Fife were listed by the County Planning Officer a few years ago as buildings of historic or architectural interest. Many of these have been examined by George Dick of Dunfermline. Where the original number of nestboxes could be estimated the average was about 660, and if the surviving dovecotes are typical of the 360 mentioned by Thomson the total nestbox capacity must have exceeded 200,000. It is not known what proportion of the nestboxes in a dovecote might be occupied—Smith (1931) cites an 18th century authority that two nestboxes should be provided for each pair of pigeons—but it seems likely that the domestic pigeon population must have been enormous and competition with Rock Doves potentially severe over a period of several centuries. Similarly 12 dovecotes in Moray remaining about 1930 contained an average of 670 nestboxes (Douglas 1931) and 17 in Banff, out of 25 examined between 1960 and 1965, had, on average, about 400 nestboxes (Hewson, unpublished).

Against such competition it seems remarkable perhaps that any Rock Doves remain. But Goodwin (1958) has pointed out two possibly significant factors:

1. Domestic pigeons (or Rock Doves raised in captivity) showed a sexual preference for birds similarly coloured to their own parents, *i.e.* Rock Doves would be unlikely to mate with domestic pigeons of a different colour.

2. In parts of Egypt Rock Doves and dovecote pigeons (here presumably of equal size) rarely or never interbred with the usually much larger pied, white, or red domestic pigeons.

Rock Doves appear to have survived best in those areas, sometimes rather sparsely cultivated, where dovecotes were least common. While large free-standing dovecotes fell into

disuse from the 18th century onwards, substantial dovecotes were incorporated in some of the larger farm steadings at a later date, probably during the first half of the 19th century. How long these survived, and how many pigeons they held, is uncertain, and the decrease in the Rock Dove's range may have occurred after the final decline of the large dovecote.

The decline of the Rock Dove in Norway has been described by Collett (1921) and I am grateful to Dr I. D. Pennie for drawing my attention to this reference. Between 1830, when Rock Doves were numerous on islands near Stavanger and on the adjoining mainland, and about 1860, many were killed because of damage to cornfields. This destruction, coupled with severe winters and predation by Goshawks *Accipiter gentilis* and Eagle Owls *Bubo bubo*, led to a severe decline in numbers and restriction of range. The last Rock Dove was shot near Stavanger in 1873, although a few birds persisted on some of the islands after this date. On the other hand a pair of feral pigeons imported into the island of Uvitingsay in 1885 had descendants numbering over 50 by 1900.

Persecution of Rock Doves may have played a part in Scotland also. Persecution of dovecote pigeons was proscribed by stringent laws from the 15th century onwards, when presumably they were held to be distinguishable from Rock Doves.

Murton and Westwood (1966) in considering inter-specific competition, suggest that the dovecote pigeon must always have been tied to a feeding area within reasonable range of the loft, whereas the Stock Dove could inhabit a wider range of country, using either trees or rock holes for nesting. The distribution of dovecotes in Banff and Moray (and probably also in Fife) was, however, such that their occupants could have fed throughout most of the cultivated coastal area, and contemporary sources indicate that there would be very few trees for Stock Doves to nest in.

The area now occupied by Rock Doves in Scotland has the following characteristics:

1. It has not been successfully colonised by Stock Doves.
2. The feral pigeon population has never been large. There were very few large dovecotes in Easter Ross, east Sutherland and Caithness; few or none in N.W. Sutherland or Wester Ross.
3. The rocky coastline provides abundant nest sites in caves to which the Rock Doves may also resort during the day and to roost.
4. Arable land tends to be restricted to a narrow, compar-

atively treeless, coastal strip. This restricted habitat might favour the Rock Dove against competition from Stock Dove and Woodpigeon.

It would be of interest to know more of the Rock Dove's feeding habits and its relationship, in feeding flocks, with other pigeons; information might be obtained by regular observations in a selected area rather than by shooting. The extent to which Rock Doves breed throughout the year is, in many nesting caves, a problem for the more agile ornithologist. Downhill (1965) for example found three nests with eggs on Island Roan, Sutherland, in September with a population of 9 or 10 birds, while P. E. Davis (*in litt.*) found the breeding season on Fair Isle short, with perhaps only two broods.

Acknowledgments

I am grateful to Derek Goodwin for much help and advice and to Dr I. D. Pennie for information and for reading a draft of this paper. George Dick made a detailed examination of many of the Fife dovecotes. The following completed questionnaires or supplied information: A. F. Airey, N. K. Atkinson, R. O. Blyth, British Girls' Exploring Society, R. N. Campbell, Dr M. E. Castle, R. Corbet, E. Cowieson, G. L. A. Patrick, P. E. Davis, Dr G. M. Dunnet, W. M. M. Eddie, J. Edelsten, J. J. D. Greenwood, E. N. Hunter, V. P. W. Lowe, D. Macdonald, M. J. C. Maclean, R. W. Marriott, Dr D. H. Mills, A. Neal, D. J. Norden, D. Oliver, G. A. Richards, Dr R. Richter, Dr M. Rusk, D. M. Stark, C. Tait, C. H. Walker, K. Walker, R. D. Wilson, P. Wormell, A. A. Wright, B. Zonfrillo.

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Table. 1. Rock Doves and feral pigeons on the Scottish mainland

County	No. of returns	Pigeons examined	Apparent Rock Doves	%	Comments
Dumfries	0				
Kirkcudbright	0				
Wigtown	0				
Ayr	2	143	69	48	
Renfrew	1				no suitable coast
Bute	1	3	3	100	
Argyll	3	c.28	c.28	100	
	1	30+	—	—	Perhaps a few feral
W. Inverness	0				
W. Ross	6	121-131	112-122	93	
N. & W. Sutherland	14	313	313	100	also some ferals
Caithness	1	200+	—	83	about 80% coast covered
E. Sutherland	1	5	5	100)	at Ord of
	1	several		100)	Caithness
	1	15	12	80	Mound-Aberscross
	1	21	6	29	Bonar Br.-Mound
E. Ross	0				see Lees (1946)
E. Inverness	1				no coastal cliffs
Nairn	0				no coastal cliffs
Moray	1	55	25	46	
Banff	1	78	8	10	
Aberdeen	1	35-45	10-15	22-43	
Kincardine	0				
Angus	2	c.1220	c.502	41	
Fife	1	112	14	13	
East Lothian	1	12	0	0	

Counties shown in heavy type are those to which the Rock Dove is probably now restricted.

Table 2. Rock Doves and feral pigeons on Scottish islands

Island	No. of returns	Pigeons examined	Apparent Rock Doves	%	Comments
Islay	1	88	88	100	
Jura	1	34	34	100	
Colonsay	1	15	15	100	

PLATE 40. Razorbill, Handa, June 1965. With the main paper in this issue dealing with seabirds (see p. 340) we take the chance to publish portraits of four Scottish species.

Photograph by William S. Paton

PLATE 41. Great Skua, Hermaness, 1966.

Photograph by William S. Paton

PLATE 42. Dark-phase Arctic Skua, Hermaness, 1966.

Photograph by William S. Paton

PLATE 43. Cormorant at nest.

Photograph by William S. Paton

Tiree	1	22	22	100	
Rhum	1	20-30	all	100	a few 'strays' at farm
Skye	2	31	31	100	
Longa, Gairloch	1	c.100	c.100	100	small island near mainland
Pabbay & Berneray	-	20	20	100	Diamond *et al* 1965
Barra	2	87-127	all	100	
Vatersay	1	2	2	100	
Benbecula & S. Uist	1	5 flocks of 5-40	all	100	
Harris	1	68	68	100	
Handa	1	8	6	75	
Eynhallow	1	89	83	93	
N. Ronaldsay	4	71	71	100	mean of 4 counts, range 68-74
Fair Isle	1	c.30	c.30	100	Obvious passages in Nov
Mousa	1	10	10	100	
Foula	-		20-40		Jackson 1966

Short Notes

Gyr Falcons in Orkney and Shetland

On the forenoon of 13th May 1966 I had a Gyr Falcon under observation for 15 minutes as it cruised about over Burrien Hill between Firth and Harray. It was an obvious falcon, with a fairly similar flight silhouette to the Peregrine but with broader-based and more blunt-tipped wings and a relatively longer and slightly squarer-ended tail. Gliding against the breeze it was very Peregrine-like but its wing action was noticeably slower. The light was quite good though there was no sun at the time. The bird was fairly uniform darkish grey above and paler below. When it turned sideways I saw that there were no clear-cut head and face markings or moustaches. I had the opportunity of comparing it with a female Hen Harrier and would say that the falcon's wingspan was at least as great if not greater. I might add that I am very familiar with the Peregrine and had been watching the species fairly extensively.

The Gyr Falcon has occurred in Orkney from time to time. Several records are given in *The Birds of Scotland*, and the late G. T. Arthur lists one in April 1947 and another in August 1949.

E. Balfour.

On 2nd, 3rd and 4th August 1966 we identified a Gyr Falcon

at Halligarth in the Baltasound district of Unst when Stephen Saxby flushed it from trees which it had been frequenting since late May. It perched on a stone dyke and on a pole but could not be approached. An Oystercatcher and Common Gulls were seen to mob it.

Description A very large greyish-brown falcon (slightly smaller than Great Skua) with the whole body mottled brown on buff; wings and tail greyish-brown; no tail bar seen; plumage, especially wings, much abraded; no distinctive marks or moustachial stripe, but dark area round eye; tail long and less tapered than Peregrine's, looking very broad when fanned as bird landed; wings long with broad bases and slightly blunted tips; head seemed small when neck stretched.

The flight was direct and fairly fast but the shallow wing-beat was slower than a Peregrine's. The blunter wings and longer but less tapered tail gave it a different silhouette. When gliding for four or five seconds it held its wings very flat. Fuller descriptions have been submitted to the Rarities Committee. FJW has watched Lanner and Saker Falcons abroad and we are both familiar with Peregrines.

The most recent of a number of Gyr Falcons recorded in Shetland was at Kergord on 9th September 1965 (*Scot. Birds* 4: 87) but the long stay of the 1966 bird is interesting.

MAGNUS SINCLAIR, F. J. WALKER.

Spotted Crakes in West Sutherland

In late June 1966 W. A. Sinclair of Inverness was told about some unusual birds which, since early June, had been haunting a marsh in northwest Sutherland. Each evening from dusk onwards they called loudly and continuously and one observer who had heard them suggested that they were Spotted Crakes. WAS went to the marsh on 25th June and obtained a sound recording of the birds' calls which confirmed the identification.

The following day D. M. Bremner, A. Munro, WAS and DM visited the locality and found that there were three crakes present in the marsh. Each bird appeared to hold a strip of territory and it was noticeable that the individual holding the middle portion had a distinctly louder note than those of the other two birds. During the daylight hours of early evening, occasional calls only, mostly single, were heard, but from 2100 hrs GMT calling became almost incessant. In order to entice the birds to come nearer WAS played back the sound recording from the edge of the marsh while the others patrolled the shallower parts around the outer edge. Several times a bird approached to within about six or seven yards of a searcher but, owing to the treacherous nature of the surface, the thickness of the vegetation and, perhaps most of all, to the elusiveness of the birds them-

selves, all efforts to flush or even to catch a glimpse of one were unsuccessful.

The crakes remained in full voice until the end of the third week of July when calling became less frequent, and finally it stopped early in August. The prolonged period of territorial calling suggests that they were three unmated males. The best accounts of the unusual nature of the Spotted Crake's call have been given by P. F. Holmes (*Brit. Birds* 42: 364) who describes it as "like the lashing of a whip, but without the crack at the end," and by Dr Kurt Bauer (*Brit. Birds* 53: 523) as "a quite toneless sound, strongly recalling ... a short and sharp stroke of a lash cutting through the air." Holmes also refers to the bird watched by him as taking no notice of the flashing of a torch; similarly, when car headlights were shone across the Sutherland marsh the crakes were quite undisturbed and continued calling. These papers are ably summarised by Dr Bannerman in his essay on the Spotted Crake in Volume 12 of *The Birds of the British Isles.*

D. Macdonald.

(R.W.J. and Mrs E. M. Smith independently discovered these birds and reported up to four calling one evening, but it is clearly very difficult to arrive at an exact figure where more than one or two birds are calling. There is no previous record for the Northwest Highlands.

Other 1966 records are of one calling on 29th April, but not later, at the same Dunbartonshire marsh as last year (*Scot. Birds* 3: 416) (T. D. H. Merrie); single birds heard in East Inverness-shire at marshy places two miles apart on Speyside on 6th July (R. Lévêque), and again at one of them two days later (Hon. D. N. Weir); one dead at Weisdale, Shetland, on 11th April (*Scot. Birds* 4: 243); and one calling during June or July (full details not yet received) on Foula (E. E. Jackson).

The status of this species in Scotland is obscure. Many of the reports obviously refer to migrants, and it may be that these spring birds come here more or less by chance, but reports of birds calling at particular marshes in Scotland for weeks and even months in recent years suggest that they could well breed. Breeding is difficult to prove, but the bird's call is most characteristic and easily remembered so that visits to suitable marshes on calm evenings in spring and early summer would readily show whether Spotted Crakes were there or not.—Ed.)

White-winged Black Tern in Orkney

At 4 p.m. on 11th June 1966, a sunny day with light easterly winds, A. Swanney telephoned to say that he and his

sister had identified a White-winged Black Tern on Ancum Loch close to their farm on North Ronaldsay. Within five minutes of getting there I found the bird. Its behaviour was very similar to that of a Black Tern we saw in 1965. The most obvious plumage differences were the white tail, the distinctly white leading edge of the wing as it flew towards us, and the three shades of the upper wing, very noticeable as it flew past. Compared with Arctic Terns, which mobbed it as it flew towards their nesting area, it was decidedly smaller—about the same size as a Little Tern but appearing daintier, with a more fluid flight. The following description is compiled from notes taken at the time:

> Head, nape, mantle, throat, underparts and under wing-coverts black; rump, tail and under tail-coverts white; primaries and secondaries grey with outer tips of primaries appearing slightly darker; greater wing-coverts off-white to light grey; lesser wing-coverts white, very noticeable as bird rested on a post; tail slightly forked; legs and feet red.

We could not find the bird next day, but I saw it again on the 13th, perched on a fence post in the water. It flew off across the loch and was not seen again. I understand that the only previous record of a White-winged Black Tern in Scotland is of one in the Outer Hebrides on 23rd May 1964 (*Scot. Birds* 3: 258).

KENNETH G. WALKER.

Some breeding notes on the Collared Dove

As few observations regarding the breeding of the Collared Dove in the British Isles have been published, the following note, which refers to the nesting of a pair at Dornoch in Southeast Sutherland, may be of interest.

The nest was placed at a height of about 15 feet, and one foot out from the trunk of a dead cypress, which stood amongst a small clump of trees bordering the local curling pond. It was found on 2nd September 1966 but the incubating bird was not flushed until the following day, when the nest contained two eggs. At 1730 hrs GMT on 16th September it held one egg and a newly hatched nestling; the second chick hatched out between 0930 and 1800 hrs on the 17th, giving incubation periods of at least 13+ and 14+ days respectively. As the normal incubation period is stated to be about 14 days it appears probable that the second egg may have been laid on 2nd September, but unfortunately the nest contents were not known on that date.

With the exception of a period of six days from 19th to 24th October, the nest site was visited at least once daily from 15th September to 5th November. The growth of the

nestlings followed the normal stages of development. After the 6th day they were not observed to be brooded during the daytime and by the 17th day they were fully feathered. At 0830 hrs GMT on 6th October the young were still in the nest but by 1230 hrs they had left and were perched on a branch about two feet away. The fledging period was thus 19+ and 18+ days respectively. On 8th October however both fledglings were back again sitting in the nest, where they remained for two days. A return to the nest site has been recorded by Marchant (*Ibis* 105: 527) who, referring to the breeding of the Collared Dove in Iraq, states that "after 15 days or so the young tend to move out of the nest onto neighbouring branches or may even leave the nest-site altogether one day and return the next." Ferguson-Lees (*Brit. Birds* 57: 174) gives the fledging period as between 14 and 21 days. Two reasons could account for this wide variation—disturbance of the nestlings when they are nearing the fledging stage and/or the fledglings habit of returning to the nest—either of which could have occurred in the present case. To avoid the risk of premature fledging through disturbance by climbing up to the nest the fledglings were observed from the ground from the 16th day onwards, and had the site not been visited daily the fledging period might have been recorded erroneously as 21 or even 22 days.

Up to 1st November there was no indication that the fledglings had ever left the area of the nest site, and even when observed at close range they hardly showed any sign of wariness. Throughout this period they appeared to be entirely dependent upon the parent birds and during the first week after fledging were invariably accompanied by at least one adult, but later they were frequently left unattended. By 29th October one juvenile had acquired the black half-collar. On 1st November however a sudden change of behavour became evident; when approached they quickly flitted from branch to branch in a somewhat restless manner and next day they were flying around freely. Thereafter the two juveniles were seen only occasionally in the vicinity of the nest site, but they and the adults continued to roost there. From 20th November only one of the juveniles turned up at the roost, and during a spell of severe weather in early December the roost was abandoned.

D. MACDONALD.

Roller in Orkney

Returning from watching a White-winged Black Tern on 11th June 1966 on North Ronaldsay I saw a bird making short shrike-like flights from a pillar of stones on top of a dyke. I stopped the car and viewed it through my binoculars and

identified it as a Roller, evidently the first Scottish record since 1959, when one was seen in Shetland in July (*Scot. Birds* 1: 190). The weather was bright and sunny with a light easterly wind. I watched the bird for ten minutes and obtained the following description:

> Head, nape, throat and underparts greenish-blue; mantle and scapulars russet-brown; rump deep blue; centre tail feathers brown, contrasting with greenish-blue of others and of upper tail-coverts; apparently a faint black tip to the tail, more evident on outer feathers; primaries almost black at the tips to pale blue at the base; secondaries pale blue at the tips to brown at the base; greater wing-coverts pale greenish; lesser wing-coverts deep blue, almost purple.

When the bird was at rest the greenish-blue, russet and black were very noticeable, but when it took to the wing it seemed to explode into various colours. It looked nearly twice as bulky as a male Blackbird with food in its mouth which made two attacks, driving it off with the second. It had a rapid wing-beat and flew straight out to sea in the general direction of Fair Isle.

KENNETH G. WALKER.

American Robin in Kirkcudbrightshire

About 5 p.m. on 12th May 1966 at Woodhall Loch, near New Galloway station, my wife and I had the pleasure of watching an American Robin for 20 minutes. Its movements were thrushlike as it fed on open ground beside reeds and some trees at the north end of the loch. I was able to get excellent views with a telescope and with binoculars from about 30 ft. The bird moved about quite slowly and would stand upright and motionless for several seconds at a time, but it also walked and hopped across the fairly tufty grass of the meadow. Once it was chivvied by a Blackbird and the two birds seemed much the same size. When I approached too closely it flew off at a low height and was lost to view.

It was a striking bird, reddish orange below from throat to white under tail-coverts. The upperparts, including the tail, were grey-brown, but in some lights the head seemed to be a little darker. The light broken eye-ring and throat feathers were less well defined than in the *Field Guide* illustration. The thrush-length bill was straw coloured. Unfortunately I did not note the leg colour, and I failed to see any pale area on the lower belly or white tips to the outer tail feathers. Nonetheless both my wife and I are quite certain the bird was an American Robin.

We considered whether it might have been an escape but there was nothing to suggest this. The wind was fresh south-westerly and had been in roughly that quarter for several

days. We searched for the bird again on the 14th with A. Donald Watson but could not find it.

E. Hales.

(The only American Robin recorded previously in Scotland was one at Grimsetter in Orkney on 27th May 1961 (*Scot. Birds* 2: 343).—Ed.)

Nesting of a leucistic Song Thrush in Sutherland

On 10th March 1966 there appeared in the vicinity of my garden at Dornoch a bird in creamy white plumage without a single dark feather, later identified as a male Song Thrush. It appeared identical with a bird which haunted the same locality for a few days in August 1965, and which was recorded erroneously as a leucistic Blackbird (*Scot. Birds* 3: 431). During April this bird had numerous skirmishes with an established pair of Song Thrushes but was ultimately driven away by them. By mid May, however, it had secured a normal-plumaged mate, which on 1st June hatched out a brood of five nestlings from a nest built in a holly bush in my garden. Within the first few days three of the young disappeared and during the following days the female appeared to be brooding the remaining two nestlings for abnormally long periods. However, they survived until the evening of 10th June, by which time they were just beginning to feather. Unfortunately, they were then taken by a predator, most probably a cat. The feathers which were visible at that stage appeared to be quite normal. The only song heard from this abnormal male was of a very fragmentary nature and only heard twice at widely separated intervals, the last occasion being on the morning following the disappearance of the two nestlings. On that same day the bird disappeared and it was not seen in the area again until late September.

D. Macdonald.

Red-throated Pipits in Shetland in spring

On 1st June 1966 while watching Rock and Meadow Pipits along the cliff edge of Inner Brough, Strandburgh Ness, Fetlar, I observed a pipit with a brick red throat and upper breast. I watched it for short periods between 1500 and 1520 hrs GMT as it appeared and disappeared on the undulating surface at the top of these low cliffs feeding on short grassy areas. The light was excellent.

Description Upperparts, including rump and tail-coverts, buffish brown, broadly streaked black-brown; sides of head and lores pinkish; upper breast palish uniform brick red, with narrow black-brown streaks on breast broadening as colour of upper breast merged into

pinkish buff of lower breast; flanks pinkish buff, heavily streaked black-brown; belly and under tail-coverts uniform buffish; tail feathers black-brown, central ones browner and outer ones white; bill brown; legs and feet dirty flesh.

The only call identified as coming from this bird was a frequent *chup,* repeated as it fed and with great frequency when it was disturbed by other pipits. Although I have no previous experience of this species the bird could only have been a Red-throated Pipit. I was not able to visit the area again.

KEITH L. FOX.

(Another Red-throated Pipit in Shetland was on the Out Skerries on 11th and 12th May 1966. Details of this bird will appear in an account which the observer, R. J. Tulloch, is preparing of several visits he made to these islands in 1966. Spring records, usually in May, are rarer than autumn ones. —ED.)

Lesser Grey Shrike in Shetland

While birdwatching on Whalsay on 17th October 1965 I found and identified an adult Lesser Grey Shrike. I was able to watch it many times as it stayed in the same area until the 24th. During all this time I never saw it perch higher than fences and dykes, although there were telephone and electricity cables overhead. It often sat on fences and fence posts turning and tilting its head as it watched for insects, which it darted after, returning to the fence, but seldom to the same perch, to eat them. Several times I saw it hover Kestrel fashion for about 15 seconds before diving into the long grass after insects. Its stance was noticeably more upright than a Great Grey Shrike and its flight was more direct and low.

On 22nd October I took E. J. Wiseman to confirm its identity. While we were viewing it from behind a dyke, to our great astonishment a Great Grey Shrike came and perched only 30 yards from it. We were able to compare the two on the spot, surely a very rare chance. I dread to think how I would have felt if it had been the Great Grey Shrike which was there when we arrived. The following is a description I made of the Lesser Grey Shrike during its stay:

Crown, nape, back and scapulars grey, with rump slightly paler; broad black stripe through eye, continuing across forehead and lower part of crown (so clearly defined that I took the bird for a male); underparts white, with a definite pinkish flush on sides of breast; wings black with broad white bases to primaries showing as white patch on closed wing; tail black with white outer pair of feathers; bill black and hooked; legs dark; eye dark.

JOHN H. SIMPSON.

Rose-coloured Starling in Shetland

It was reported to me that a "pink starling, marked like a Hooded Crow" had been seen at Gonfirth, Voe, on 24th June 1966. On 5th July John Walterson, caretaker of Lerwick Museum, saw a bird similar to the museum's specimen of a Rose-coloured Starling on a roadside fence at Voe with a small flock of Starlings.

The next evening I went to Voe hoping to find the Starlings' roosting place—four gardens in the village have suitable sycamore trees. I found no Starlings, but I found the Rose-coloured Starling right away, roosting alone in a dead fir tree.

My attention had been drawn by the breast colour, showing very pale at 30 yards. The bird sat quite still, only turning its head slowly from side to side as I watched. It was raining lightly and the wet black crest drooped to a fine point behind the neck. The breast was pink, paler and less brilliant below the black bib. The legs were pink like a Greenfinch's and bore no rings. The bill looked yellow, not pink as stated in most books except the new edition of the *Field Guide*. As I moved closer the bird became nervous and hopped to a higher branch, where it sat back-on and showed the pink mantle and black wings. Now it flicked its tail frequently—very unstarlinglike—then flew off giving an impression of even more pink.

It was seen again next day, 7th July, near where Mr Walterson had seen it, and again it was with a small flock of Starlings.

DENNIS COUTTS.

Current Notes

Compiled by P. J. B. SLATER

(Key to initials of observers : D. R. Anderson, D. G. Andrew, W. Austin, R. S. Baillie, D. J. Bain, Miss P. G. T. Baxter, Dr J. Berry, Miss F. M. Black, H. Boase (HBs), H. Boyd (HBd), T. Boyd, W. Brotherston, D. G. Bruce, R. Byres, A. Campbell, C. Campbell, R. N. Campbell, Mrs V. E. Carrick, J. F. M. Carson, M. Cayne, P. Clark, Miss E. T. Connacher, Miss H. Coppock, D. Coutts, G. M. Crighton, W. A. J. Cunningham, R. H. Dennis, D. Dewar, R. C. Dickson, Miss J. M. Donnan, H. E. M. Dott, Mrs J. D. Doyle, Dr G. M. Dunnet, Dr W. J. Eggeling, N. Elkins, Sir R. Erskine-Hill Bt, M. J. Everett, R. Farmer, J. Ferguson, H. Fisher, Miss G. A. Fleming, H. A. Ford, R. W. Forrester, K. L. Fox, I. Gibson, Rev. J. Gibson, Miss E. Grace, Mrs J. A. R. Grant, Mrs H. S. C. Halliday, K. C. R. Halliday, C. G. Headlam, J. A. D. Hope, D. C. Hulme, E. N. Hunter, E. T. Idle, Rev. G. T. Jamieson, R. A. Jeffery, P. Johnson, G. D. Joy, D. J. Law, A. F. Leitch, I. H. J. Lyster, D. Macdonald (DMcD), M. A.

Macdonald, J. W. McEwan, K. S. Macgregor, R. D. Macgregor, Dr H. N. MacLachlan, I. M. MacLean, J. M. Macleod, A. MacRae (AMcR), A. Mainwood (AMd), S. Manson, W. Matheson (WMn), G. Maxwell, W. S. Medlicott, Prof. M. F. M. Meiklejohn, Mrs D. Melrose (DMs), J. Mitchell, N. C. Morgan, W. Moss (WMs), W. Ogilvie, D. W. Oliver, J. S. Oliver, N. Picozzi, R. K. Pollock, A. D. K. Ramsay, C. P. Rawcliffe, G. A. Richards, W. K. Richmond, G. Rodger, I. B. Roy, Dr M. Rusk, Mrs H. M. Russell, R. Shaw, M. Sinclair, A. J. Smith, Mrs E. M. Smith, R. W. J. Smith, Dr T. C. Smout, T. Spence, D. M. Stark, C. Tait, I. Taylor, Miss V. M. Thom, D. A. Tindal, R. B. Tozer, R. J. Tulloch, C. Walker, F. Walker, K. Walker, D. I. M. Wallace, G. Waterston, Dr A. Watson, A. D. Watson, M. Watson, I. S. Watt, J. Watt, Hon. D. N. Weir, G. T. White.

Unless otherwise stated all dates refer to 1966.)

Distribution

Observations made before 1st August 1966 are not included in this section except where they are relevant to more recent topics.

A **Great Crested Grebe**, apparently the first recorded in the Outer Hebrides, was diving offshore at Broad Bay, Lewis, on 30th October (IMM). **Slavonian Grebes** seen inland have been two at Linlithgow Loch, West Lothian, on 31st October (JFMC, MC, IT), and one at Portmore Loch on 9th and 16th October, the first record for Peeblesshire (DGA, EMS, RWJS). One was seen at the mouth of the River Luce in Luce Bay, Wigtownshire, on 5th November (RCD), and one in Loch Ryan in the same county on 8th December was accompanied by four **Black-necked Grebes** (GAR). A **Little Grebe** was seen on the Peffer Burn at Aberlady, East Lothian, on 18th December (RSB).

A late **Sooty Shearwater** was flying north against a strong wind off Fife Ness on 6th November (PGTB). A few 'Blue' **Fulmars** are seen in Shetland every year, but the sighting of at least five between Fair Isle and Sumburgh on 11th October was certainly exceptional (RJT).

The **Gadwall** at Kilconquhar Loch, Fife, showed a peak of 23 birds on 13th November (DWO), and in the middle of that month an estimate of the **Wigeon** present along the south shore of the Dornoch Firth and in the Cromarty Firth, but excluding the Black Isle, suggested a figure in the region of 22,000 (CGH). Three **Pintail** were on the River Don at Bridge of Don, Aberdeenshire, on 19th November (ADKR), and there was a pair at Stormont Loch, Perthshire, on 13th (VMT). A high count of **Shoveler** for the area was of 22 at Hoselaw Loch, Yetholm, Roxburghshire, on 27th November (RSB).

Scaup winter in very large numbers off Seafield, Midlothian, and odd birds are seen inland in the Forth area not infrequently. But single drakes at Duddingston and St Margaret's

Lochs, Edinburgh, on 25th September are interesting in view of the fact that only 12 had arrived at Seafield on the same date. Another male had arrived at Portmore Loch by 11th September and was last seen there on 2nd October (DGA). Other records on fresh water are of a drake on a loch near Dalrymple, Ayrshire, on 17th October (GAR); seven birds at Kilconquhar Loch on 18th December (DWO); and single females at Loch More, Caithness, on 6th November (per DMS), and Fala, Midlothian, from 20th to 26th December (WB).

The numbers of **Pochard** on the lochs in the Queen's Park, Edinburgh, increased steadily from October until 26th December, when 6000 were present (DGA). The count then remained high and on 2nd January 1967 there was this number on Duddingston Loch alone though they left in hundreds on the next day as ice closed in (DRA).

Inland **Long-tailed Duck** have been seen as follows: a female at Loch of Lowes, Perthshire, on 29th December (HBs); a female at Meikle Loch, Newburgh, Aberdeenshire, on 16th November (NE); an immature female at Rosebery and Gladhouse reservoirs, Midlothian, on 20th and 27th November respectively (DGA, EMS, RWJS); an immature male at Carlinwark Loch, Kirkcudbrightshire, on 28th December (GAR); and a pair at Lindores Loch, Fife, on 13th and 14th November (JW). A particularly large count for Ayrshire was of 41 at Barassie on 13th December (GAR).

In places where **Goosanders** have become less frequent in recent years, three females were seen at Morton Lochs, Fife, on 27th November (CT), and a drake was at Duddingston on 17th December and on 1st and 2nd January 1967 (DRA, DGA, AFL). The **Smew** records include several drakes:

Bridge of Don—redhead on 19 Nov (ADKR).
Stormont Loch—redhead on 13 Nov (VMT).
Gullane Point, E. Lothian—redhead on 15 Oct (CT).
Gartocharn, Dunbarton—redhead on 20 Dec (RS).
Castle Semple Loch, Renfrew—♂ on 27 Nov (RWF, RF, RDM, RBT); ♂ and 2 redheads on 11 Dec (IG, RAJ, GTW).
Ayr—♂ on sea on 13 Dec after severe frost (GAR).
Martnaham, Ayr—♂ on 5 Dec (GAR).
Carlinwark Loch—redhead on 13 Nov (GAF).
Loch Ken, Kirkcudbright—redhead on 28 Dec (GAR).

September records of **Grey Lag Geese** are all of small numbers and most probably therefore refer to our local breeding stock. Though late in the month this may be true of 11 seen circling near the Lake of Menteith, Perthshire, on 22nd September (RKP), and six flying over Duddingston on 24th (DRA).

Eight Greenland **White-fronted Geese** were at Fair Isle on 25th October (RHD). Eight Whitefronts were seen at Brub-

ster, Caithness, on 23th October and 30 of the Greenland race were there on 29th (per DMS). Also in Caithness, 115 Greenland birds were at Loch Winless on 12th November and 140 on 29th (JARG), while 100 were noted at Loch Soarach on 26th (per DMS). Abnormally early, a Greenland bird was at Loch Leven, Kinross-shire, on 5th October (CC). An immature was near Dunning, Perthshire, on 22nd November (VMT). On 25th November 71 arrived at the Moor of Genoch, Wigtownshire, and the number there had increased to 84 by 4th December (RCD). Near Gartocharn, Dunbartonshire, 14 Greenland birds on 31st December was the peak number (RS).

Three at Montrose Basin, Angus, on 9th September (GMC), and a skein over Cupar, Fife, on 12th (DWO), are the first reports of **Pink-footed Geese** for the winter. On 16th 13 flew west at Balmerino, Fife (HBs), and in Midlothian, 40 flew south at Loanhead (RWJS) and 20 at Roslin (ADKR). Thereafter there are rather few reports spread out over the rest of the month, suggesting steady passage without any noteworthy peaks.

From time to time strange-looking hybrids or colour forms arise amongst geese and cause some confusion. This year there has been a spate of such reports, including one of a white domestic goose seen at Aberlady on various dates between 19th November and 24th December (MAM, RBT). One of a local flock, it had escaped on the way to the butcher. Another oddity was a goose shot near Crieff, Perthshire, on 12th December, which was thought to be a hybrid between a Chinese and a Grey Lag Goose as it had characteristics in many ways intermediate between these two species (JB). A leucistic Pink-footed Goose was at Loch Leven on 5th October (CC), and an almost pure white individual was seen at Fala Hill, Midlothian, on 11th (per WB), and subsequently at Aberlady on various dates between 15th and 30th October (DJ, KSM, NCM).

Not all white geese seen have been lacking in black wingtips however. An unringed **Snow Goose** was at Loch Leven between 24th October and 6th November and again on 14th December (HBd, CC). One was at Aberlady on 26th November and 11th and 16th December (DJ, WKR). The dates suggest that all these reports might refer to the same individual. A blue-phase **Lesser Snow Goose** was at Loch Leven on 28th November (CC), and in the area of Morton Lochs, Fife, on 3rd, 19th and 27th December (JB, WJE), where what might well have been the same bird was seen last winter (4: 242).

A Pale-bellied **Brent Goose** was seen at Loch Leven on 27th September, 5th October and 9th December (CC), and one was at Dupplin, Perthshire, on 13th November (TCS). Two

at the mouth of the River Don, Aberdeenshire, on 23rd October were acccompanied by three of the Dark-bellied race (ADKR), and another Dark-bellied bird was at Caerlaverock on 11th December (RBT).

There are widely scattered reports of **Barnacle Geese** away from their normal wintering grounds:

Sumburgh—5 in flight on 26 Sept (RE-H).
Foula, Shetland—10 on 27 Oct (AMd).
Loch Winless, Caithness—1 on 12 Nov (JARG).
Meikle Loch, Aberdeen—4 with roosting Pinkfeet on 20 Nov (HEMD).
Montrose Basin, Angus—1 on 3 Oct (GMC).
Dupplin—1 on 19 Nov (TCS).
Abernethy, Perthshire—1 on 15 Oct (JW).
Endrick mouth, Stirling/Dunbarton—12 on the shore on 27 Sept (RKP); 4 on 2nd and 8 Oct (IG, DJL, GTW).
Eden Estuary, Fife—1 on 2 Oct (CT).
Fife Ness—1 on 9 Oct (JW).
Aberlady—a ringed bird on 9 Oct (DWO); 5 on 26 Dec (MAM); 1 on 27 Dec (DJ).
Tyninghame, E. Lothian—19 flying up estuary on 9 Oct (MFMM, CT).
Almond Estuary, Mid/West Lothian—3 on 2 Oct (TCS).
Gladhouse—1 on 23 Oct (EMS, RWJS).

A particularly early **Whooper Swan** was an adult at Fair Isle on 18th August, and five were there on 21st September (RHD). Also in Shetland, two were on Loch Hillwell on 21st and three on Loch Spiggie on 22nd September (per DC), while the first in Lewis were three at Tolstachaolais on 24th (WAJC). The earliest further south were at about the same time with one on Loch Morlich, Inverness-shire, on 24th (ADKR); two at Invergordon, Easter Ross, on 23rd (AMcR); and another at Black Loch, near New Cumnock, Ayrshire, also on 23rd (GAR). Several large concentrations have been reported:

Loch Hielen, Caithness—110 on 16 Oct (per DMS).
Loch Calder, Caithness—peak of 100 on 28 Oct (per DMS).
Invergordon—500 from mid Nov (CGH).
Spey valley, Inverness—over 100 between Kingussie and Nethy Bridge at end Dec (DNW).
Near Kinross—175 on stubble on 24 Oct (HBs).
Barr Loch, Renfrew—maximum of 184 on 27 Nov (RBT).
Kaimsflat, near Ednam, Roxburgh—over 120 in stubble field on 5 Dec (WSM).

The early arrivals in Shetland showed a low proportion of immatures with as few as three young for every 50 adults (RJT), and this also seems to have been the case at Barr Loch, where of 160 on 22nd November only 11 were immature (MJE). A herd of 72 near the mouth of the River Earn, Perthshire, on 3rd December was accompanied by an adult **Bewick's Swan** (VMT), and an adult Bewick's was at

Kilconquhar Loch on 26th (DWO).

During a snow shower on 8th December a pair of **Golden Eagles** was seen at the coast at Port Glasgow, Renfrewshire: they were in flight and appeared to have come across the Clyde (RF).

Several **Rough-legged Buzzards** have been seen in Glenesk on the Angus/Kincardine border. There were three there on 20th October, 2 on 26th, one on 29th October and one on 30th November (GMC, WKR). One was nearby, three miles north-east of Brechin, Angus, on 12th November (GMC). Elsewhere, single birds have been at Cullivoe, Yell, Shetland, on 23rd December (RJT); at Fair Isle on 18th-22nd and 21st-22nd October (RHD); at Aberlady on 19th October (WMs, MW); and near Evanton, Easter Ross, between 13th December and 6th January 1967 (CGH). An **Osprey** was seen at Loch Macleod, Lewis, on 8th October (WMn); and a later bird, though in a more usual area, was one near the south end of Loch Ness, Inverness-shire, on 23rd October (GM per DNW).

Coot are not often recorded on the sea except in hard weather but six were on Loch Ryan on 24th September. On 15th October numbers had increased to 61, and there were 60 on 12th November and 45 on 17th December (RCD).

A flock of 1700 **Oystercatchers** at the Almond Estuary on 17th December is the highest number recorded there and indicates a complete recovery from the heavy losses suffered in the winter of 1962-63 (TCS). **Grey Plovers** are scarce in Caithness, where there was one at Reiss on 25th and 27th October and one at Sandside on 16th December (per DMS, JARG).

Large concentrations of **Golden Plover** have been of 700 at Milton, Caithness, on 8th October (per DMS), and about 1000 near Penicuik, Midlothian, in mid October (RWJS).

Single **Black-tailed Godwits** were seen in October at Skinflats, Stirlingshire, on 9th (JFMC, MC, IT); Tyninghame on 8th (AFL, MAM); and at Barassie from 3rd right on to 14th December (GAR). Ten were at the Eden Estuary on 2nd October (DWO). Wintering **Green Sandpipers** have been one at Aberlady on 26th November (CT), and one at Tyninghame on 27th and again on 4th December (TB, IBR, RWJS, CT).

A **Spotted Redshank** was heard at Tyninghame on 15th October (DIMW); one was at Aberlady on 13th November (NE); and one was seen two miles south of Ayr on various dates from 19th November to 22nd December (GAR, RBT). One was on the beach at Thurso, Caithness, on 27th and 28th August, and three were in the same place on 1st October (SM). On 2nd October three were noted at the Eden Estuary (DWO).

Very far north for the time of year, a **Greenshank** was recorded near Evanton, Easter Ross, on 20th December (CGH). The peak in **Knot** numbers at the Almond Estuary was a month earlier than usual on 6th November when about 4000 were in the area (TCS). At Tyninghame the estimate of about 1000 present on 11th December was exceptional (RWJS).

Single **Little Stints** in October were at Eden Estuary on 2nd (DWO); Skinflats on the same day (JFMC, MC, IT); and Aberlady on 16th (IG, GTW). A visitor from across the Atlantic was a **Pectoral Sandpiper** at Virkie, Shetland, which was first seen in flight at dusk on 21st September. The next day better views were obtained of it and its Ruff-like characteristics, but with speckled breast delineated sharply from light underparts, were clearly seen (GDJ).

An August **Curlew Sandpiper** not mentioned previously (4: 318) was at Barassie on 21st (RWF). Singles were at Eden Estuary on 2nd October (DWO); Tyninghame on 2nd and 16th (TB, IBR, RWJS); and Montrose Basin on 3rd (GMC). One was seen on 2nd October at Skinflats and there were two there on 8th and 16th (JFMC, MC, IT).

Great Skuas staying rather late in the north were lone birds seen at Foula on 1st, 2nd and 8th November (AMd). Also in Shetland, a **Pomarine Skua** was seen between Fair Isle and Sumburgh on 11th October (RJT). At the Ythan Estuary, Aberdeenshire, a **Long-tailed Skua** was seen in flight on 23rd August (FMB, ETC).

Winter records of **Lesser Black-backed Gulls** in Edinburgh are of one at Lochend Loch on 20th November (DGA), and three at Duddingston on 28th December (MAM). One of the Scandinavian race was at Gullane Bay, East Lothian, on 22nd October (MAM). An immature **Glaucous Gull** was at Wick on 27th October (per DMS), and there was another at Nigg Bay, Kincardineshire, on 16th October (ADKR). Single **Iceland Gulls** in Aberdeen were seen at Seaton Park on 19th November and over King's College on 2nd December (ADKR). A bird of this species was at Scrabster, Caithness, on 21st November and 24th December (per DMS), and singles on Fair Isle on 9th and 21st November and 8th December (RHD).

In Angus 180 **Little Gulls** were counted at Carnoustie on 7th October (GMC), and there were 53 nearby at Buddon on 10th (HBs). In Fife single adults were seen at Kilconquhar on 17th October (PGTB), and near Elie on 20th November (DWO). A first-winter **Kittiwake** was inland at Gladhouse on 20th November (RWJS).

The only report of a **Little Auk** outside Shetland is of one found alive in Tentsmuir Forest, Fife, on 13th December (ISW per VMT).

Guillemots do not normally return to their breeding cliffs until well into the new year especially in the north. On Handa, Sutherland, they returned some three weeks earlier than they had been known to do previously on 24th December 1965 and even sooner this year when they were back on the cliffs in their thousands on 14th December (per GW). Further south, Guillemots were seen in large numbers on the White Heugh and stacks at St Abb's Head, Berwickshire, on 22nd December, the shortest day of the year (GW). In 1965-66 Guillemots at Fair Isle were recorded ashore on 15th November, regularly from 12th January, and continuously from 2nd April (*Fair Isle Bird Obs. Bull.* 5: 203).

A **Turtle Dove** on the Isle of May, Fife, on 6th October (HAF), and another at Ballaggan, Stirlingshire, on 7th (JM), were no doubt continental migrants. There were two on Fair Isle on 12th October and one on 19th-22nd (RHD). A **Nightjar**, discovered at the Moor of Genoch on 21st September, had a broken wing and unfortunately died subsequently (per RCD). A **Kingfisher** was found at Skibo Estuary, Dornoch Firth, Sutherland, on 12th November and was still in the area on 26th (DMcD). A **Hoopoe** at Badenkep farm, Buchlyvie, Stirlingshire, on 24th October (JWM per JM), and one which flew up from beside the road near Luss, Dunbartonshire, on 5th November (JDD) could well both have been the same bird.

There was a **Woodlark** on Fair Isle on 24th October (RHD). Three **Shore Larks** were seen at two different places in October: at Spike Island, Tyninghame, on 16th (RWJS), and among sand dunes one mile south of Newburgh, Aberdeenshire, on 30th (GMD).

November **Swallows** have been reported from the following places:

Newburgh—1 on 3rd and several on 4th (GMD).
Brechin, Angus—1 on 29th (GMC).
Lundin Links, Fife—2 immatures on 4th (PGTB).
Aberlady—5 on 7th (PC, GTJ).
Longniddry, E. Lothian—1 on 5th (HAF, MFMM).
Stranraer, Wigtown—2 on 27th (HF).
Sandhead, Wigtown—1 on 3rd (RCD).

A late **House Martin** nest containing two young was found in Dunbar, East Lothian, on 8th October (PJ, AFL). The latest report of this species is of one at Dumfries on 28th October (JMD, DMs).

A **Hooded Crow** seen near Sorn, Ayrshire, on 20th October was rather to the south of the normal range of this species (GAR). The first **Magpie** to be recorded in North Sutherland was originally seen a few miles south of Bowside on the River Strathy on 16th June and remained in the area until

mid September (AC, RNC).

A few **Great Tits** appeared in Shetland in late October and early November and some were still present at the end of December (RJT). One of the Continental race was trapped on Fair Isle on 10th October (RHD). Several observers have commented on the good numbers of **Long-tailed Tits** to be seen about in the south but the reports from the north are more striking. In Caithness the first for many years were seen in October when there were 20 beside the Wick River on 8th, 15 in Wick on 15th and 15 at Castletown on 24th, with smaller numbers in several areas thereafter (per DMS). In Orkney two appeared on North Ronaldsay on 20th October (KW), and in Stornoway Woods, Lewis, the first were two on 5th November and they were seen regularly thereafter until the end of the year, the highest count being of eight (IMM, JMM, WMn). Also in an unusual area, well north of its normal range, a **Treecreeper** was seen in Scalloway, Shetland, between 21st and 23rd October (RHD, RJT).

The first **Fieldfares** in Shetland were very early with one on Fair Isle on 30th and 31st July, and in August, five on 4th, 14 by 6th and 20 on 7th (RHD). Four were in Unst by 5th August (MS, FW); three on Foula from 13th to 19th (AMd); two on Fetlar on 29th (WO); and one on Out Skerries on 31st (RJT). Surprisingly the only August record from elsewhere is of three in Glen Clova, Angus, on 14th (GR per GW), nor indeed are there reports of more than a few birds in September though there were 90 at Fair Isle on 28th and 250 on 29th (RHD). In the Moorfoots, Midlothian, several hundred were seen on 2nd October (WB). A large influx occurred on 5th and 6th October, when numbers reported in the south of the country were very great, though in Caithness there appeared fewer than usual (DMS). On 5th there were many hundreds in Glen Affric, Inverness-shire (DCH), and about 1500 were counted going south at Crosshill, Ayrshire (RBT), while a similar number were seen passing over Ayr (GAR). On 6th a big movement began at Fair Isle (RHD), there was a noticeable increase in Caithness (DMS), and hundreds were passing Fife Ness (DWO). There was a big fall in Shetland on 7th (RJT), with a Fair Isle peak of 800 on 7th-8th (RHD), and on 9th 1500 were counted going south during the day at Yetholm (RSB). The arrivals seem to have carried on right through the middle of the month. On 13th there was a concentration of about 680 near Barr, Ayrshire (GAR), and a further large influx was noted in Shetland on 16th (RJT) with 750 at Fair Isle on 19th (RHD). At the end of the month a further movement took place in the east. On 29th and 30th parties were going west at Dirleton, East Lothian, at a rate of about 500 per hour (MFMM),

and further down the coast hundreds were passing north-west at Tyninghame on 30th (RWJS). On 31st they were passing WNW over the Meadows, Edinburgh, at a rate of 300 per hour (TCS). Most of these reports refer to passage, but the impression gained by most observers is that the numbers wintering are well above average this year.

Two **Song Thrushes** at Gladhouse on 27th November showed the white underparts and grey backs of the Continental race as well as being at a higher level than that at which British birds normally winter (DGA). Big movements were noted at Fair Isle from 6th to 22nd October, with peaks of 800 on 7th-8th and 300 on 19th-20th (RHD).

The first **Redwing** was seen in Unst on 2nd September (MS); two were on Fair Isle on 13th (RHD); and six were seen at Bridge of Orchy, Argyllshire, on 22nd (ADKR). The first big flocks arrived in Shetland on 29th (RJT), when 500 were on Fair Isle (RHD). On 1st October there were 600 on Out Skerries (RJT), over 600 on Fair Isle (RHD), and 200 at Fife Ness (DWO); and on 2nd Fair Isle numbers had doubled to 1200 (RHD), the first was seen in Lewis (WMn), parties were migrating in the Moorfoots (WB), and 80 had reached Yetholm (RSB). Fair Isle had a peak of 2500 on 6th, 2000 on 7th-8th and 1000 on 10th (RHD). At Crosshill, Ayrshire, on 5th October some 500 were seen going south (RBT), and the same number were seen during the 9th at Yetholm (RSB). On 14th 400 were seen coming in off the sea at St Abb's Head (DIMW). In Shetland Redwings outnumbered Fieldfares on passage up to 16th October and thereafter the situation was reversed (RJT). Of over 2000 thrushes at Fife Ness on 6th October the majority were Redwings and, as was the case with the early Shetland arrivals, a good proportion were Song Thrushes (DWO). Good numbers of **Ring Ouzels** were seen in Shetland with the early thrush movements and again around 16th October (RJT), and there are also several reports for this period from further south. The scarcity of **Blackbirds** in their usual October numbers was noticeable both in Shetland and in Caithness (RHD, DMS, RJT).

A **Redstart** at Castlebay, Barra, on 16th October (MR), and a female **Black Redstart** at Fife Ness on 6th (DWO), were both well off their migratory routes.

Large numbers of **Robins** arrived on the east coast in the first half of October: after spectacular arrivals in Shetland, many were reported to be wintering (RJT). The main movements on Fair Isle were from 6th to 23rd October with a peak of 250 on 13th (RHD). At Fife Ness there were 12 on 1st October, 20 on 2nd, 40 on 6th and 100 on 13th (DWO). On 9th October there was one every few yards along the cliffs at Dunbar, making a total of about 50, most of them

singing (MFMM). Rather further east, at St Abb's Head, the maximum count was of 55 on 15th (DIMW).

Several **Blackcaps** were seen in October along with other migrants, the most off course being two females at Castlebay, Barra, on 16th (MR), and the biggest count 25 on 7th at Fair Isle, where the latest was seen on 8th November (RHD). The first birds which could be said to be wintering were a female at Colintraive, Argyllshire, on 21st November (MMR), and a male in the Castle grounds at Stornoway on 27th (IMM). A hen was in a garden at Roslin, Midlothian, from 25th December until at least 30th (ADKR). Three **Barred Warblers** were recorded in October: one in Lerwick, Shetland, from 3rd till 5th (DC), one on Fair Isle on 1st (RHD), and one at St Abb's Head on 17th (DIMW). A **Chiffchaff** was in Castle Woods, Stornoway, on 20th November (IMM, WMn, MFMM), and the last at Fair Isle the same day (RHD).

A large influx of **Goldcrests** took place on the east coast in late September and October. Some were reported from Tarbat Ness lighthouse, Easter Ross, each night from 24th to 28th September (per CGH), and a fairly large fall was noted in the second week of October at Scurdie Ness lighthouse, Angus (per GMC). Many arrived in Shetland during the first half of October (RJT), with 200 on 10th and 300 on 13th on Fair Isle (RHD), and counts at Fife Ness totalled 15 on 1st, 10 on 6th and 50 on 13th (DWO). Minimum figures at St Abb's Head were 75 on 14th, 130 on 15th, 60 on 17th and 50 on 19th (DIMW). An influx was also recorded at Wick on 15th and 16th (per DMS); at Dalmeny woods, West Lothian, on 16th (TCS); and at Barns Ness, East Lothian, on 15th, when ten were present (DIMW).

In Shetland three **Red-breasted Flycatchers** were seen in the first week of October: one in Yell, one in Lerwick and one in Unst (per RJT). One was at Fair Isle on 13th (RHD) and another at Fife Ness on 10th (PGTB).

A **Grey Wagtail** frequented Castle Woods, Stornoway, between 5th November and 16th December (JMM, IMM, WMn). Also in an unusual place, one was perched on the fountain in Princes Street Gardens, Edinburgh, on 13th September (DGA).

Great Grey Shrike records are very numerous, even considering that it is a conspicuous species and not all sightings may refer to different birds. They have been reported from the following counties:

Shetland—about 24 reported 6-22 Oct: up to 6, Unst, 15th-22nd (MS, FW); up to 5, Fetlar, 7th-16th (WO); at least 3-4, Whalsay, 8th-12th (J. Simpson); 2, Sumburgh, 6th (DC); 1, Yell, 6th (A. Gear) and 16th (RJT); 1, Collafirth, 7th and 16th (A. Nicolson); 1-2, Foula, 7th-11th (AMd).

Caithness—1 at Bilbster on 11 Oct (JARG); 1 at Loch Dhu on 8th; 1 at Wick on 15th; 1 at Tister on 29th (per DMS).

Sutherland—1 in outskirts of Dornoch on 3 Nov (DMcD).

Ross—1 between Inverpolly and Badagyle on 22 Oct (RNC); 1 near Garve on 10 Nov (ENH); 1 between Evanton and Dingwall on 2 Nov (CGH).

Inverness—1 catching insects between Eabost and Dunvegan, Skye, on 10 Oct (HSCH, KCRH); 1 at Boat of Garten in early Oct; 1 at Laggan Bridge throughout Nov; 1 at Dunachton, Kincraig, at end Nov and early Dec; 1 at Dulnain Bridge in late Dec (DNW); 1 at Torlundy, Fort William, on 25 Dec (RHD).

Perth—1 catching insects at Loch Rushy, near Callander, on 15 Oct (VEC); 1 at Killin on 30 Oct (VMT); 1 beside Loch Lubnaig on 11 Nov (EG); 1 seen to pursue Blue Tit at Aberfoyle on 26 Nov (PC, GTJ).

Aberdeen—1 in Old Aberdeen on 1 Dec (ADKR); 1 at Strachan, Banchory, on 16 Dec (AW).

Angus—1 at Airlie, Kirriemuir, on 22 Oct and 17 Nov (DAT); 1 at Montrose Basin on 17 Oct; 1 in Glenesk on 20 Oct and 2 on 23rd (GMC).

Fife—1 on Isle of May on 6th and 7 Oct (HAF); immature at Fife Ness on 8 Oct and adults on 14 Oct and 5 Nov (DWO).

Dunbarton—1 at Ardlui on 30 Oct (VMT); 1 at Endrick Mouth (on Stirlingshire border) on 23rd and 29 Oct (ETI, JM), 13 Nov (WKR), and, after disappearing for most of December, on 31 Dec (ETI, JM).

Midlothian—1 at Fountainhall, Stow, from 28 Oct to at least 20 Nov (HNM, AJS); 1 found dead beside parked cars in George Street, Edinburgh (though not necessarily having succumbed there), on 19 Nov (JG per WA); 1 at Rosslynlea reservoir on 20 Nov (EMS, RWJS); 1 in Dens Cleuch on 26 Nov (MAM), and 1 nearby at Threipmuir on 4 Dec (DJB, JADH); 1 seen to catch Brambling on Braid Hills on 4 Dec (HC).

Peebles—1 at Portmore Loch on 1 Jan 1967 (DD).

Berwick—1 at St Abb's Head on 15 Oct (DIMW).

Ayr—1 seen to kill Robin and skewer it on thorn bush at Dalrymple on 27 Nov (per GAR).

Kirkcudbright—1 near Dundrennan on 25 Oct (RB per JMD); 1 at Dalry on 22 Nov (GAF); 1 at Woodhall Loch on 4 Dec (WA, GAR, ADW).

Dumfries—1 at Drumlanrig Castle on 10 Nov (IF).

A migrant immature or female **Red-backed Shrike** was at Tyninghame on 16th October (TB, IBR, EMS, RWJS).

Towards the end of the year a new **Starling** roost was found at Broubster in Caithness. It was estimated that 50,000 birds were packed into an area of about 600 square yards in a small coniferous plantation (per DMS).

A **Hawfinch** was seen at Winchburgh, West Lothian, on 20th November (per IHJL). Also local and therefore worth recording, **Goldfinches** seen have been: four at the River Creed, Stornoway, on 27th November (IMM); six at Strachan, Aberdeenshire, on 9th December (NP); and 30 feeding on thistles in a garden in Aviemore, Inverness-shire, in late November and early December (DNW).

A few records of **Siskins** show some to have arrived with

the other migrants in the first half of October. Parties of 12 and upwards were to be seen in Shetland at that time (RJT), and Fair Isle had peaks of 58 on 7th and 45 on 13th (RHD), while at Fife Ness the maximum count was seven on 2nd (DWO). Also on 2nd, one was seen in Dalmeny Woods (TCS), and two were at Drummore Harbour, Wigtownshire (RCD). 25 were seen at St Abb's Head on 14th (DIMW), and ten were at Stormont Loch on 16th (VMT).

The number of **Twite** in the southwest during the autumn was much greater than usual. In Wigtownshire, 33 were seen at Piltanton Estuary on 12th November and 45 were in a turnip field beside Wigtown Merse on 18th December (RCD). In Ayrshire parties were larger with over 150 near Colmonell on 22nd November, and flocks of over 80 at Dunure on 29th November and at Bogside on 1st December, as well as many parties of up to 20 along the coast (GAR).

The first record of **Bullfinches** in Lewis is of a pair in Castle Woods, Stornoway, on 21st November (MFMM). Two males were seen in Shetland on 19th October (DC), and Fair Isle had at least one male (22nd-24th October) and one female (5th-9th November) of the Northern race (RHD). The only reports of **Crossbills** are of one at Fair Isle on 13th and 15th October (RHD), one at Fife Ness on 13th October (DWO), and four at Ford, Midlothian, from about 31st October until at least 16th December (CW).

As with winter thrushes, observers of **Bramblings** often report "large numbers" or "a good year" so that the more numerous the species becomes the fewer concrete figures there are to support the impression. Where numbers have been estimated this year they proved to be very large. The first in Shetland was an early female at Fair Isle from 7th to 9th August and odd birds were there from 27th August to 5th September. On 28th September there were 90 and on 29th at least 200 (RHD), when there were also 150 at Out Skerries (RJT). The big fall took place the following week, however, for on 7th October 400-500 were on Yell and over 1500 on Fair Isle, and flocks of 300-400 were seen in the islands during the rest of the month (RHD, RJT). The earliest further south was at Fife Ness on 2nd October and 150 were there on 6th (DWO). On 5th, 40 were seen going south at Crosshill, Ayrshire (RBT). Of the many flocks seen subsequently throughout the country the largest were: 400-500 near Heriot, Midlothian, on 5th November (WB); at least 300 at Yetholm Loch between 6th November and 26th December (RSB); at least 1000 near Hawick, Roxburghshire, on 16th November (WSM); about 500 and over 1000 in fields at Middleton Moor, Midlothian, on 20th November (WB); over 300 at Watten Mains, Caithness, on 24th November (JARG); 500-600 near Stane,

Shotts, Lanarkshire, on 11th December (RF, RWF); and at least 1000 at Dunbog, Fife, also on 11th December (TS per JW).

Good views were had of an immature **Ortolan Bunting** at Fife Ness on 14th October, and it was also heard to call on a few occasions (DWO). After the strong arrival at Fair Isle in September (4: 321), there are several reports of **Lapland Buntings** from elsewhere, including a few in Shetland during October (RJT). About 20 were seen near Tain, Easter Ross, on 17th December (CGH), and one was heard at Barns Ness on 15th October (DIMW). At Aberlady there were nine on 8th October (EMS, RWJS), five on 16th (IG, GTW), a male on 19th (MAM), three on 13th November (NE), and one on 19th (DGB).

Apart from a male which spent the summer on Foula (per RJT), the first **Snow Bunting** was one at Fair Isle on 11th September, and numbers on the island rose progressively thereafter, though maxima of 100-120 were less than usual (RHD). On Fetlar, Shetland, there were at least 50 by 16th (WO, RJT), and four were at Aberlady by 25th (JSO).

In Caithness two **Tree Sparrows** were at Gersta on 11th November and one was at Castletown on 4th December (per DMS). A large flock in a more normal area was of 200 on stubble between Silverknowes and Cramond, Midlothian, on 4th December (TCS).

Earlier observations—before 1st August 1966

A **Little Auk**, still in winter plumage, was seen flying out of Mid Yell Voe, Shetland, on the late date of 21st May. Also staying longer than usual into the summer was a **Redwing** flying up the Burn of Northdale on Fetlar, Shetland, on 28th May (KLF).

General observations—behaviour

Additional information has come to light on the habit of **Common Gulls** of nesting in trees (see 4: 324). In 1952 a nest was discovered 22 feet up in an oak tree beside Loch Tummel, its presence there perhaps being connected with the fact that the level of the loch had recently been raised and had swamped the sites previously used (RNC). A more recent record is of two nests found in the crowns of small Scots Pines at heights of eight and ten feet respectively near Evanton on 10th May 1966. Each contained three eggs which were being incubated. Local information suggested that this was a normal habit and that these nests tended to be more successful than those in the same colony on the ground which were subject to heavy predation (CGH).

A **Wren's** nest at an unusual height was found at Currie, Midlothian, on 29th June some 25 feet off the ground in a

Scots Pine. By 29th July there were young in the nest, and it contained no remains on 24th November, suggesting that the young had fledged (CPR).

On 23rd April a **Blackbird** was heard singing in a completely dark shed at Leith docks. A nest, which contained young on 12th August, was constructed at a height of 25-30 feet above the ground in another shed nearby (CPR).

Correction

Loch Shandra, where a Scaup was seen on 20th August (4: 315) is not in Perthshire but in Angus near Kirkton of Glenisla.

Reviews

Ireland's Birds : their Distribution and Migrations. By Robert F. Ruttledge. London, Witherby, 1966. Pp. xv + 207; map and 11 plates (16 photographs, one double-page). 21½ x 14 cm. 30/-.

It was as recently as 1954 that Irish ornithology was brought up to date by the publication of *The Birds of Ireland*, of which Major Ruttledge was one of the three authors. This was the first general survey of Irish birds for over 50 years, and now after only 12 years the picture is again brought up to date (to the end of 1965) by the present work. It is a tribute to the amount of ornithological activity in Ireland that enough material has accumulated over this short period to justify a new publication. Much new information on migration has resulted from the opening of observatories on the islands of Copeland, Tory and Cape Clear—especially the last-named, which has revealed movements of seabirds on a scale quite unsuspected previously—and a great deal more is now known about the status and distribution of the breeding birds. These developments are all fully summarised in *Ireland's Birds*, which is illustrated with well selected habitat photographs and contains some excellent introductory sections on general and local topography and on migration.

This is a book which will be indispensable for any ornithologist visiting Ireland, but its value goes further than this and it will be of particular interest to Scottish ornithologists. The bird faunas of the two countries have much in common, and Ireland is an important wintering ground for many of the Scottish breeding birds, and also for many of the migrants which have passed through Scotland on their way from northern Europe. Many of the changes in status that have taken place in Ireland during the present century are closely parallelled in Scotland. Thus big increases have been recorded in almost all the breeding and wintering duck, and one feels some sympathy with the wildfowl counters at Lough Neagh who have to cope with such numbers as 4,000 Goldeneye, 14,000 Pochard and 25,000 Tufted Duck. The numbers of wintering Grey Lag Geese have decreased greatly over the past 25 years, due to the fact that virtually the whole of the Icelandic population is now remaining to winter in Scotland, and one could wish that Ireland would be equally generous in exporting in our direction some of the Pale-breasted Brent Geese that have shown such a gratifying increase in the past ten years. Our export to Ireland—the pair of Golden Eagles which first bred in Antrim in 1953 and which attracted some notoriety by continuing to bring Scottish blue hares to their eyrie—has unfortunately led to no permanent colonisation, and the last record of breeding was in 1960. Hen Harriers are continuing their recovery, but with the commoner birds

of prey it is the all-too-familiar story of a general decline. Wood Sandpiper, Spotted Redshank, Ruff, Little Gull and Black Tern are species which have all proved only recently to be regular on migration. As in Scotland, Great Black-backed, Lesser Black-backed and Herring Gulls have increased greatly, and the Collared Dove was well established and breeding in 15 counties by the end of 1964. Other breeding species which are increasing are Carrion Crow, Jay, Chough, Grasshopper Warbler, Chiffchaff, Pied Wagtail, Bullfinch and Tree Sparrow, while on the debit side Arctic Tern, Barn Owl, Ring Ouzel and Corn Bunting all show material decreases. Nightjar and Kingfisher, two species which have declined drastically in Scotland over the past 20 years, appear to be holding their own in Ireland although there is some recent evidence of local decrease on the part of the Kingfisher.

One may perhaps regret that the author did not devote more space to showing how these and other changes in status and distribution fit into the wider pattern of current changes throughout western Europe as a whole, and one may query his decision to include no section on foreign distribution. These criticisms, however, need not deter us from giving a warm welcome to this latest and most valuable addition to the ornithological literature of our islands.

DOUGAL G. ANDREW.

Birds of the Atlantic Islands. Vol. 3. A History of the Birds of the Azores. By David A. and W. Mary Bannerman. Illustrated by D. M. Reid-Henry, G. E. Lodge, C. F. Tunnicliffe and others. Edinburgh and London, Oliver & Boyd, 1966. Pp. xix + 262; 20 plates (7 in colour) of 6 paintings and 23 photographs (2 in colour), 54 line drawings and 8 maps. 26¼ x 18¾ cm. 84/-.

Detailed reviews of the two earlier volumes in this series were published in *Scottish Birds* 3: 45; 4: 259. One marvels at the prodigious output of fine bird books from Dr Bannerman and at the energy of his field excursions at the age of 80. This latest volume is very much in the best Bannerman tradition. In place of the dry abbreviated checklist that one must often accept for an area that has been ornithologically rather neglected, here is a spacious treatment that allows the author to give of his best.

It is the third volume in a series originally planned to fill two but now to be completed in four with an account of the birds of the Cape Verde Islands. Individual volumes for the different groups of islands are clearly an advantage and have enabled the author to work on his canvas expansively and to include extra background which might have been squeezed out. The layout is attractive and uncramped and in addition to the detailed accounts of the individual species there are chapters on local ornithological work and personalities as well as contributed articles on the various islands and many maps. Wisely Dr Bannerman continues to call on his friends to write on their particular subjects, and the result is a better book.

The new coloured plates by D. M. Reid-Henry are as acceptable as ever, but one cannot feel the same enthusiasm for the inclusion of plates by George Lodge that have already appeared in *The Birds of the British Isles*. Doubtless this makes it economically possible to illustrate the work in colour, and probably it will be perfectly satisfactory for readers in the Azores, but many people who buy the book may feel slightly aggrieved, especially as there seems to be no indication that these are not new illustrations. Without the same reservations one notes also that many of the attractive vignettes which add a lightness to the text pages have already appeared in one or both the previous volumes in the series.

Birdwatchers visiting the Azores must obviously have this book, but they will still be few in number. Most of us will buy it for other reasons, some for reference and interest and others because it is a real pleasure to own and to handle. Let us not forget that this is a Scottish book—written, printed and published in Scotland. We should be grateful that Edinburgh is still producing work of this quality. It cannot be said too often that Oliver & Boyd have done a magnificent job on this as on all the earlier Bannerman volumes they have published since the war.

ANDREW T. MACMILLAN.

Population Studies of Birds. By David Lack. Oxford, Clarendon Press (Oxford University Press), 1966. Pp. v + 341; one plate, 31 line drawings, 31 text figures and 50 tables. 23½ x 15½ cm. 63/-.

Many ornithologists and ecologists will have been eagerly awaiting the publication of Dr Lack's latest book. It is a sequel to his earlier work on *The Natural Regulation of Animal Numbers*, published in 1954, and is a critical assessment of the ideas there put forward, in the light of the longterm studies of bird populations carried out since it was written. The book is therefore concerned with such problems as breeding seasons, clutch size, age of maturity, density-dependent mortality, and territory, in relation to the current and widely conflicting views of various workers on how animal numbers are determined in nature. Studies on 24 species are reviewed, including familiar birds such as tits, owls, Woodpigeon and Blackbird. The work of Scottish ornithologists figures prominently, particularly their studies of Red Grouse and Ptarmigan.

The value of this book lies not only in its being a standard reference on bird population studies, but also in its review, in an appendix, of the theoretical controversies concerning animal populations. In this, Lack summarises the main points of his earlier book, chapter by chapter, and then discusses density-dependent regulation, the attack on density-dependence and, lastly, animal dispersion.

He suggests that in evaluating these population studies the reader should keep in mind three divergent theories of population dynamics. The first is based on the assumption that animal populations are normally in a state of balance and that, though they fluctuate, they do so in a more or less stable and restricted manner. This situation can be brought about only through density-dependent factors which tend to depress the population at high densities and to increase it at low densities. The chief factors influencing numbers which might vary in a density-dependent way are the reproductive rate, the mortality due to food shortage, predation or disease, and self-regulating behaviour such as territorial fighting.

On the second theory density-dependent control is held to be quite unimportant in nature, and most animal populations are considered to fluctuate irregularly in numbers from year to year through factors, notably those linked with climate, which act independently of density.

On the third view, developed comprehensively by Wynne-Edwards, the concept of density-dependent regulation is accepted, and food shortage is considered to be the ultimate factor limiting numbers; but animals normally regulate their own density far below the potential upper limit set by food, because through group-selection they have evolved both dispersive behaviour and restraints on reproduction.

Lack maintains the first theory, combined with the view, developed especially for birds, that the reproductive rate (in particular, the number of eggs in the clutch) has been evolved through natural selection to correspond with the number which, on average, gives rise to the great-

est number of surviving offspring. Since clutch size varies little with population density, the main regulation of numbers must be brought about by density-dependent variations in mortality; and in wild birds the commonest density-dependent mortality factor is food shortage. Lack points out, however, that the effects of food shortage may be greatly modified by movements, local as well as long-distance.

This is a scientific book more likely to appeal to the research worker and student, to whom it will become a standard work, than to the amateur, who may find it a little heavy. However, I recommend it to the amateur, with the advice that if he reads it carefully future reflections on nature will prove more rewarding.

D. H. MILLS.

The Shell Bird Book. By James Fisher. London, Ebury Press and Michael Joseph, 1966. Pp. 344; 20 colour plates, numerous text figures and illustrations; endpaper maps, 19½ x 12½ cm. 25/-.

This is not an easy book to review. Following, as it does, a run of Shell nature publications of wide 'popular' appeal one not unnaturally expects to find *The Shell Bird Book* somewhat similar in outlook. It comes as rather a surprise, therefore, to find that the emphasis is very much on the historical aspects of ornithology.

In his preface James Fisher says that he felt it was time to write an essay on fossil birds and also to analyse the birds of mediaeval times. He has done both these things and also reviewed birds in literature and ornithologists through the ages in the historical section which occupies one third of the book (chapters 1, 2, 8, 9 and 10). There is an impressive amount of information crammed into this section—so much, in fact, that at times readability tends to be sacrificed for the sake of detail. This assembling of historical facts is obviously invaluable for reference purposes but one wonders if a 'popular' book is really the most suitable place for such detailed essays as these.

Migration, protection, bird-gardening, song and "the peculiarity of British birds"—subjects likely to be of great interest to many readers—receive by comparison only sketchy treatment in a further 100 pages. The final third of the book comprises a detailed guide to birdwatching areas, societies and publications and a complete list of British birds, with brief indications of present status and a note of the earliest known records. The small colour plates by Eric Ennion are unusual and attractive but the portraits of bearded birdwatchers, which outnumber the bird studies in black-and-white, do little to enliven the text.

The reviewer was left with an impression of lack of balance in this book. Most of the author's interest and attention seem centred on the historical aspects of his subject and his treatment of more recent topics is less comprehensive than usual for a James Fisher book.

VALERIE M. THOM.

Shell Nature Lovers' Atlas of England, Scotland & Wales. By James Fisher. London, Ebury Press and Michael Joseph, 1966. Pp. 16 + 32 un. + 32 pp. coloured maps. 21¾ x 14 cm. 7/6.

At last! A guide, with maps, to places in Britain (about 700 of them) of interest to naturalists of all sorts, and not an atlas of great weight and cost but a low-priced pocket-sized compendium containing a maximum of information in a minimum of space. The 32 sectional maps of Britain, mostly 12 miles to 1 inch, drawn by John R. Flower, are overprinted with the National Grid, main roads and towns and 15 different symbols (the larger areas defined by grey tint) representing the different types of areas under some form of protection, from National Parks,

Forest Parks and Nature Reserves to smaller local reserves and sanctuaries or areas of specific interest to the botanist and birdwatcher; also selected archaeological and geological sites, and many zoos, aquaria and botanic gardens. The maps are interleaved with the text notes describing the essential features of each site. The whole is prefaced by an index and four pages of addresses of organisations responsible for or connected with the areas in the atlas.

No small task for one man to compile such an atlas, but who better to undertake it than James Fisher, whose interests cover every branch of natural history, and who, to quote the small print on the inside cover, "has pursued his hobby and profession in every county of England, Scotland and Wales, has seen every island in the United Kingdom and landed on most." Nor has he placed dry paragraphs from official publications in the limited space for the description of each site. As one would expect, the notes have an individual touch and a number of Fisherisms; and it is right and proper that the author should wax lyrical about the Yorkshire Dales " ...loved alike by hard-headed farmers, adventurous pot-holers, tender artists and dedicated naturalists." There is, understandably, a slight bias towards ornithology, but it is up to the botanists of Orkney, and others, to notify any omissions to Mr Fisher, who welcomes suggestions or corrections for future editions.

Taking a closer, critical look at the maps and the text: the best points are that (1) the concise details about each site are always on the page opposite the relevant map, and (2) the decimal reference system allows for insertion of later additions, and is easy to use in all directions between map, text and index. Inevitably there are several small misprints, but also a couple of premature Nature Reserves; and some confusion (but one hopes no ill feeling) may arise from the inclusion of proposed conservation areas or reserves, using the same symbols as for established sites. Inevitably too, some omissions: where are White Coomb and the Grey Mare's Tail? The system of grid lines on the maps and grid references should suffice for anyone with one-inch maps, but the lack of road numbering necessitates constant reference to other maps. The grey tint sometimes obscures underlying detail, and is confusing in representing several different types of area, especially on map 18 where two small grey Nature Reserve blobs overlie a large grey blob comprising mixed National Park, Area of Outstanding Natural Beauty and suggested northward extension. Some users may have small quibbles over the classification of some sites. But these are all minor points which detract little from the main achievement, the production of this Atlas, for which there has long been a need, a need voiced by members of the public during both National Nature Weeks, and proved by present sales. Let us hope it has a long life, undergoing periodic moult into revised editions.

NANCY J. GORDON.

Requests for Information

Carrion and Hooded Crows. David J. Heath, c/o Zoology Department, West Mains Road, Edinburgh 9, is making a study of relationships between these birds and of the reasons why the hybrid zone remains relatively narrow. He would particularly like to know of localities of interbreeding pairs and of any changes in the range of these two crows.

Scar Rocks. At the suggestion of the Rev. John M. McWilliam, the ornithological information on the Scar or Scare

Rocks, Luce Bay, Wigtownshire, is being brought up to date by John G. Young, The Nature Conservancy, Tadorna, Hollands Road, Caerlaverock, Dumfriesshire. He would be most grateful for any contributions, especially counts or estimates of the development of the Gannet colony and of other seabird numbers. Full acknowledgment will be given.

The Scottish Ornithologists' Club

SUMMER EXCURSIONS

Important Notes

1. Members may attend excursions of any Branch in addition to those arranged by the Branch they attend regularly.
2. Where transport is by private cars please inform the organisers if you can bring a car and how many spare seats are available. All petrol expenses will be shared.
3. Please inform the organiser in good time if you are prevented from attending an excursion where special hire of boats or buses is involved. Failure to turn up may mean you are asked to pay for the place to avoid additional expense for the rest of the party.
4. Please bring meals as indicated (in brackets) below.

ABERDEEN

For all excursions, please notify Miss F. Greig, 9 Ashgrove Road, Aberdeen (Tel. 40241, Ext. Old Aberdeen 342, 9 a.m.-5 p.m.), one week in advance.

Sunday 14th May. BLACKHALL FOREST (subject to permission). Meet Blackhall main gate 10.30 a.m. (lunch and tea).

Sunday 11th June. DINNET LOCHS (lunch and tea).

Sunday 10th September. YTHAN ESTUARY AND LOCHS. Meet Culterty 10.30 a.m. (lunch).

Sunday 29th October. LOCH STRATHBEG. Leader: J. Edelsten (lunch).

AYR

Saturday 22nd April. CULZEAN CASTLE, MAYBOLE (by kind permission of the National Trust for Scotland). Leader: A. G. Stewart. Meet Wellington Square, Ayr, 2 p.m. or car park, Culzean Castle, 2.30 p.m. (tea).

Saturdays 13th and 20th May. HORSE ISLAND, ARDROSSAN (joint excursion with Scottish Wildlife Trust). Leaders: G. Fraser and T. Kay. Meet Wellington Square, Ayr, 1 p.m. or Ardrossan Pier 2 p.m. (tea). Boat fare 5s. There will be a maximum of 11 passengers per excursion and members must contact A. G. Stewart, Branshuie, St Andrews Ave., Prestwick (Tel. 77113), at least seven days before the excursion.

Saturday 3rd June DRUMLANRIG CASTLE, THORNHILL, DUMFRIES (by kind permission of the Duke of Buccleuch). Leader: I. F. Young. Meet Wellington Square, Ayr, 1 p.m. or entrance to Queens Drive (near main road), Drumlanrig Castle, 2.30 p.m. (tea).

Saturday 10th June AILSA CRAIG, NEAR GIRVAN (joint excursion with Scottish Wildlife Trust). Leader: J. T. F. Swarbrick. Meet Wellington Square, Ayr, 9.30 a.m. or Girvan Harbour 10.30 a.m. (lunch and tea). Boat fare 12s 6d. There will be a maximum of 20 passengers and members should contact A. G. Stewart (address above) before 31st May.

Sunday 10th September. ABERLADY BAY NATURE RESERVE, EAST LOTHIAN. Leader: G. A. Richards. Meet Wellington Square, Ayr, 9 a.m. or Timber Bridge, Aberlady, 11.30 a.m. (lunch and tea).

Sunday 17th September. FAIRLIE FLATS. Leader: Miss J. Howie. Meet Wellington Square, Ayr, 10.30 a.m. or on road immediately in front of Hunterston Nuclear Power Station 11.30 a.m. (lunch).

DUMFRIES

Sunday 7th May. WILLIAMWATH BRIDGE AND LOCHMABEN LOCHS. Leader: W. Austin. Meet Ewart Library, Dumfries, 1.30 p.m.

Sunday 4th June. CASTLE POINT AND ROUGH ISLAND. Leader: J. K. R. Melrose. Meet Ewart Library, Dumfries, 1.30 p.m. (bring Wellingtons or boots).

Sunday 2nd July. LUCE BAY AND ISLE OF WHITHORN. Leader: Donald Watson. Meet Ewart Library 10 a.m. (lunch and tea).

Sunday 20th August. CAERLAVEROCK NATURE RESERVE (by kind permission of the Nature Conservancy). Leader: E. L. Roberts (Warden). Meet Ewart Library 1.30 p.m. (bring Wellingtons or boots).

DUNDEE

All excursions by private car, leaving the City Square, Dundee, at 9 a.m.

Sunday 2nd April. FORFAR/RESCOBIE LOCHS.

Sunday 30th April. FIFE NESS AND KILCONQUHAR LOCH.

Sunday 28th May. GLENESK.

Sunday 25th June. ISLE OF MAY. Numbers limited to 12. Details will be sent to applicants.

Sunday 16th July. LOCH BEN-A-CHALLY.

Sunday 20th August. MORTON LOCHS AND SHELLEY POINT.

Sunday 17th September. SCURDYNESS AND MONTROSE BASIN.

EDINBURGH

Saturday 8th April. ABERLADY BAY NATURE RESERVE (spring migrants). Leader: C. K. Mylne. Meet Timber Bridge 2.30 p.m. (tea).

Saturday 13th May. WESTWATER RESERVOIR, WEST LINTON (subject to permission). Afternoon excursion. Applications by 6th May to W. Brotherston, 22 Rutland Square, Edinburgh 1, who will supply details of time and meeting place (tea).

Sunday 28th May. THE HIRSEL, COLDSTREAM (by kind permission of Sir Alec Douglas Home). Excursion by private cars. Applications by 20th May to J. A. Stewart, 109 Greenbank Crescent, Edinburgh 10 (Tel. MOR 4210), stating number of seats required or available. Cars leave Edinburgh from square behind National Gallery 10.30 a.m. for Hirsel at 12 noon (lunch and tea).

Saturday 17th June. ISLE OF MAY (numbers limited to 12). Private cars. Applications by 10th June to Alastair Macdonald, Hadley Court, Haddington (Tel. 3204), stating number of seats required or available. Party meets and sails from West Pier, Anstruther, 11 a.m. prompt. Cost of boat about 12s 6d (lunch and tea).

Saturday 15th July. BASS ROCK (by kind permission of Sir Hew Hamilton Dalrymple). Numbers limited. Applications by 8th July to Miss O. T. Thompson, 3a Falcon Road West, Edinburgh 10 (Tel. 031-447 1637). Boat leaves North Berwick Harbour 2.30 p.m. returning about 7 p.m. Tickets, about 10s 6d, will be purchased on the boat (tea). If weather is unsuitable for landing an alternative excursion from North Berwick will be arranged.

Saturday 23rd September. ABERLADY BAY NATURE RESERVE (autumn migrants). Leader: K. S. Macgregor. Arrangements as for 8th April.

GLASGOW

Saturday 24th June. BASS ROCK (by kind permission of Sir Hew Hamilton Dalrymple). Leader: G. L. A. Patrick. Applications by 10th June to Mrs J. B. Hutchison, 27 Northbank Road, Kirkintilloch, by Glasgow (Tel. Kirkintilloch 1464). Boat leaves North Berwick Harbour 1.30 p.m., returning about 7 p.m. Tickets (approx. 12s 6d) must be purchased at Harbour Office before embarking (lunch and tea). If weather is unsuitable for landing an alternative excursion from North Berwick will be arranged.

Owing to growing lack of support over the past few years no excursions have been arranged for 1967 to either Little Cumbrae or Horse Island.

INVERNESS

Excursions Secretary: David Gardiner, 15 Grigor Drive, Inverness. Picnic flasks for all excursions except 14th June.

Saturday 6th May. FALLS OF DIVACH, LEWISTON, DRUMNADROCHIT. Leader: David Gardiner. Meet Ness Bank Church, Island Bank Road, Inverness, 2 p.m.

Sunday 14th May. CULACHY, FORT AUGUSTUS. Lea McNally, well known Gamekeeper/Naturalist, will be leader over Culachy Estate. Meet Station Square, Inverness, 10 a.m. (this excursion will be confirmed by local circular).

Friday 19th to Monday 22nd May. THURSO. Joint weekend with Thurso Group, whose Secretary, David Stark, will arrange day excursions to Caithness sea cliffs. Hotel accommodation and times of departure from Inverness to be arranged.

Sunday 4th June. LOCH AFFRIC (by kind permission of the Forestry Commission and Mr Iain Wotherspoon, Glen Affric Lodge). Leader: James MacGeoch. Meet Station Square, Inverness, 10 a.m.

Saturday 10th June. BLACK ISLE FORESTS (by kind permission of Mr H. A. Maxwell, Branch Chairman, who will also be leader). Meet Ness Bank Church 2 p.m. or North Kessock 2.30 p.m.

Wednesday 14th June. STRATHNAIRN LOCHS. Leader: David Gardiner. Meet Ness Bank Church 7 p.m.

Sunday 25th June. BEINN EIGHE NATURE RESERVE (by kind permission of the Nature Conservancy). Leader: Reserve Warden Dick Balharry. Meet Station Square, Inverness, 9 a.m.

ST ANDREWS

Applications, not later than one week before each excursion, to Miss M. M. Spires, 4 Kinburn Place, St Andrews (tel 523).

Saturday 20th May. KILCONQUHAR LOCH (by kind permission of Elie Estates). Meet North Lodge 2.30 p.m. (tea).

Sunday 4th June. AN ANGUS GLEN (provisionally Glen Doll). Cars leave St Andrews Bus Station 9 a.m. (lunch and tea).

Sunday 11th June. ST SERF'S ISLAND (subject to permission from Kinross Estates). Boats leave the Sluices, Scotlandswell, 11 a.m. (lunch and tea).

Saturday 17th June. TENTSMUIR. Cars leave St Andrews Bus Station 2 p.m. (tea).

In Scotland the R.S.P.B. now maintains eight Reserves and employs regional representatives in Orkney, Shetland and Speyside—but much remains to be done. We need your support. Please write for Membership Prospectus.

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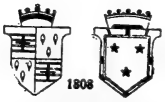

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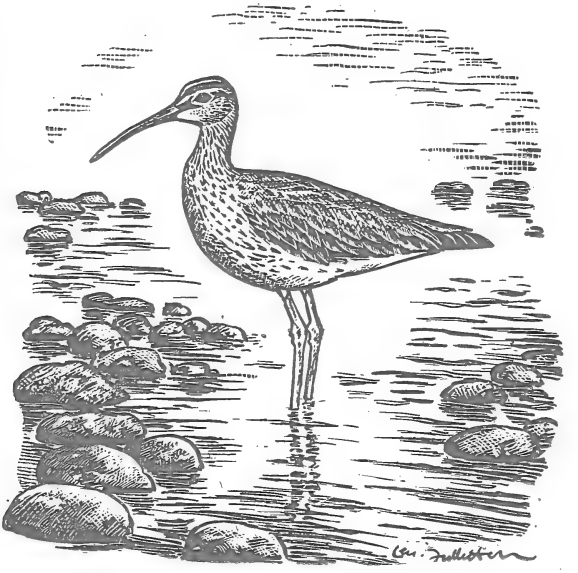

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Vol. 4 No. 6 *Summer 1967*

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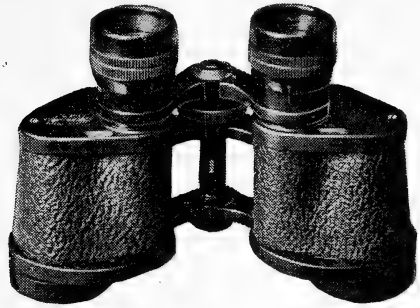

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Scottish Birds

THE JOURNAL OF THE SCOTTISH ORNITHOLOGISTS' CLUB

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Edited by Andrew T. Macmillan, 12 Abinger Gardens, Edinburgh 12.
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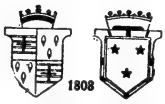

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Vol. 4 No. 6 **Summer 1967**

Edited by A. T. MACMILLAN with the assistance of D. G. ANDREW, T. C. SMOUT and P. J. B. SLATER. Business Editor, T. C. SMOUT.
Cover Design (Whimbrel) by LEN FULLERTON.

Editorial

Oil pollution. Slowly, in recent years, more and more countries have moved towards banning the discharge of oil at sea, especially where it may drift ashore and foul beaches. But no law will prevent accidents. If any good were to come from the wreck of the giant tanker *Torrey Canyon* off the Cornish coast, it could be in a greater determination to tackle the causes of oil pollution effectively, though one fears that it will be only the narrower question of how to prevent a repetition of this particular disaster that will receive close attention.

The mess is extensive and disgusting. The local people depend very much on holidaymakers for their living and are bound to suffer hardship. There is still plenty of oil washing about on the sea at the time of writing. For any seabirds that get into it—and there are probably tens of thousands that have—oil means death. It clogs their plumage so that they become wet and cold and seek refuge on the beaches. They cannot catch fish. If they preen their feathers to get rid of the oil they die from swallowing it. Auks—Guillemots, Razorbills and Puffins—are worst hit because they spend so much time in flocks on the surface of the sea, but Gannets, Manx Shearwaters, Cormorants, gulls and other species are also in trouble.

For most of the victims there is nothing that can be done. A small fraction may be saved by spending a great deal of time (and therefore money) on skilled cleaning and on keeping the birds in captivity for the many months needed to restore the waterproofing to their plumage, and finally hoping that they will take to life in the wild again when released. The R.S.P.B. and R.S.P.C.A. and other groups are doing what they can in this direction, and a fair number of birds will be saved that would otherwise have died. Anyone who has seen oiled birds will naturally want to do something for them, but it is probably only on humanitarian grounds that one can

justify the effort needed. Success will mean the difference between life and death for individual birds, but it is unlikely to have any noticeable effect on seabird populations in the southwest.

Seabird census. Supported by the B.T.O., the Seabird Group has taken on the formidable task of compiling a complete census of breeding seabirds in the British Isles in 1969. Meantime, 1967 and 1968 will be spent in finding the colonies and collecting preliminary information. In Scotland we have more seabirds, more inaccessible coast, and fewer bird-watchers than in the south, and a great effort will obviously be needed, especially in the north and west, if anything like complete cover is to be achieved. Further details may be had from R. J. O'Connor at the Department of Physics, Birkbeck College, Malet Street, London WC1 (see Requests for Information).

The Ornithological Atlas. A superb product of cooperative natural history was the publication of the *Atlas of the British Flora* in 1962 for the Botanical Society of the British Isles. For several years botanists gave almost complete priority to this; amateurs and professionals throughout the country visited and listed the plants in all but seven of the 3500 National Grid 10 km x 10 km squares in the British Isles. Sophisticated data-processing and mechanical map-making equipment then converted the huge number of individual records into a series of 1700 detailed distribution maps. Though selling at a mere five guineas, the atlas is supplied with a dozen transparent overlays for use with the distribution maps, and one may thus consider the distribution of any British plant in relation to a variety of factors such as altitude, geology, rivers, humidity, rainfall, summer heat and winter cold.

It would be extremely valuable to have such an atlas for the British breeding birds, giving accurate basic information about their distribution and, if possible, their numbers. Birds are affected by man in many ways, and never more than now. One need only think, for example, of agricultural pesticides and of oil pollution, to realise this. When some alarm is raised, the great difficulty is in getting accurate information about status, especially for common birds, to show how the situation is changing. The Common Bird Census is one excellent approach to this problem; an ornithological atlas would be another. The B.T.O. has been studying the idea, trying to work out the best ways in which to tackle it. Birds are in several respects more difficult than plants: they move about from place to place; formal proof of breeding can be had at only one time of year and requires time to get, to say

nothing of the difficulty of assessing numbers; and there are vast tracts in the wilder parts of the country that will be very difficult to cover. A further year is being given to trying out techniques, and helpers are not needed yet, but it is hoped that the scheme can go ahead in 1968.

"Scottish Birds." If you found a letter and questionnaire in your spring number of *Scottish Birds*, and have returned it to us, we are very grateful to you. Deliberately we did not enter into correspondence about any of the answers, but the ideas produced will be most useful in planning future numbers. We hope to discuss some of these ideas in a coming number and to give details of the relative popularity or otherwise of the various sections of the journal. Meantime, if you have any suggestions you would like to make about additional features or changes in *Scottish Birds* we would be happy to consider them with the rest.

Festival Cinematographique l'Homme et l'Oiseau 1967. The *Ligue Française pour la Protection des Oiseaux* offers a cup for the best documentary film on "L'Oiseau Libre d'Europe," and to receive Scottish candidates representing Scotland in this European competition would delight them. The editor has copies of the rules (in French) for anyone interested.

Current literature. Recent references of particular interest to Scottish ornithologists include:

Changes in status among breeding birds in Britain and Ireland. J. L. F. Parslow, 1967. *Brit. Birds* 60: 2-47, 97-123. First parts of highly important survey that includes much valuable Scottish information.

North Solway Bird Report No. 1—1965. A. D. Watson & J. G. Young, 1967. Duplicated typescript, privately circulated. 13 pages. Useful regional report in form of classified notes on species and appendix of statistics of active local ringing group (9423 birds of 95 species ringed 1963-65).

The Edinburgh Natural History Society News-Letter 1966. M. B. Usher (Editor), [1967]. Duplicated typescript. Pp. 31 + diagram. 2/6. Second year (see *Scot. Birds* 3: 386). Includes general bird notes and short papers on a woodland census (R. W. J. Smith), dovecots (Nora F. Henderson), and 1966 Forth Islands bird counts (R.W.J.S.).

Urban Starling roosts in the British Isles. G. R. Potts, 1967. *Bird Study* 14: 25-42. Includes maps of Glasgow urban roosts—the largest in Britain.

The birds of the Small Isles

P. R. EVANS and W. U. FLOWER

(Plates 44-47)

Introduction

The Small Isles—Muck, Eigg, Rhum and Canna—lie in the Inner Hebrides, south of Skye, in the county of Inverness-shire. Their location, and separate maps of each, are shown in figs. 1-5. Although many notes and short papers have appeared this century on the avifauna of individual islands, no attempt to collate in detail the data referring to all four islands has been made since publication of *A Vertebrate Fauna of Argyll and the Inner Hebrides* by Harvie-Brown and Buckley (1892). In this paper we document the changes in status of all bird species, particularly the breeding species, from the earliest references to the present day. The sources of information, much of it unpublished, are listed in the Appendix.

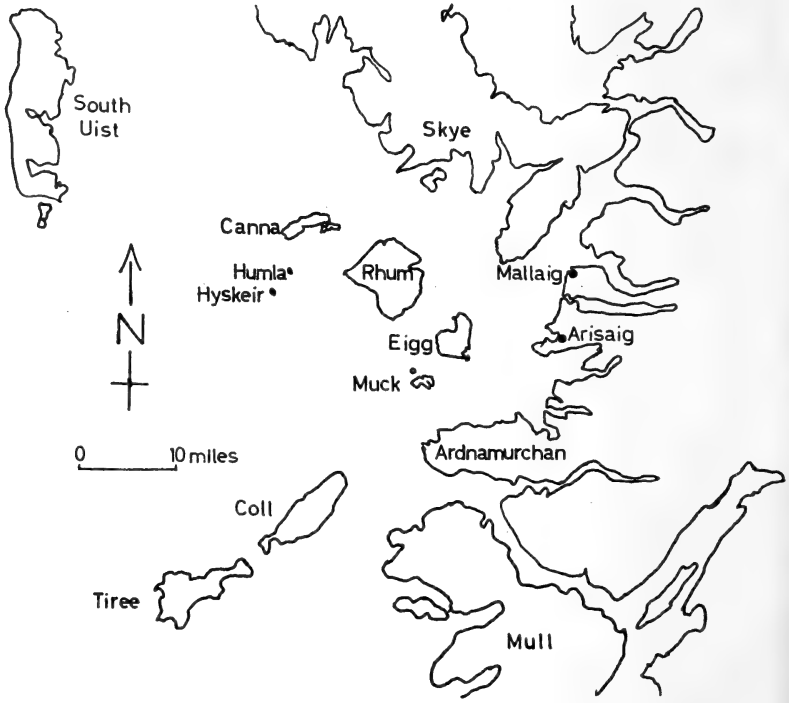

FIG. 1. Location of the Small Isles, Inner Hebrides, with respect to the mainland and other islands.

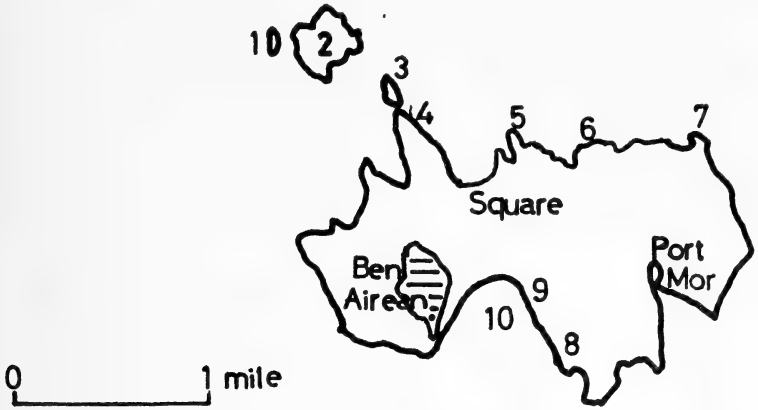

FIG. 2. Isle of Muck. Figures indicate the following places mentioned in the text: 1 Eagamol, 2 Horse Island, 3 Lamb Isle, 4 Gallanach, 5 Sgaogaig, 6 Cairibh, 7 Am Moel, 8 Fionn-Ard, 9 An Liachdach, 10 Camas Mor.

Muck (fig. 2) is the smallest and most southerly of the four islands, with an area of just over 1500 acres (about $2\frac{1}{2}$ square miles). It lies 5 miles seawards from the mainland peninsula of Ardnamurchan. Most of the land lies below 200 ft, except for the hill of Ben Airean, which rises to 451 ft. The underlying rock is chiefly tertiary basalt, which breaks down to give excellent fertile soil, and in the north this is further improved by mixing with blown shell-sand.

Eigg (fig. 3) lies about 4 miles north and slightly to the east of Muck, and is separated from the mainland by at least 7 miles of open water. It also is composed chiefly of tertiary basalt, and it has an area of over 5000 acres (about 8 square miles). The island is formed of two plateaux rising to about 1000 ft, one in the northeast, the other in the south; from the latter rises the Sgurr, a columnar pitchstone outcrop of over 250 ft, resting on an ancient river-bed of conglomerate. It is part of the same pitchstone sheet which forms the islet of Hyskeir, about 20 miles WNW in the Minch. Low ground suitable for cultivation is found on Eigg at Cleadale in the northwest (on the 100 ft raised beach) and at Kildonan and Galmisdale in the southeast. These areas of low ground are joined by a col in the centre of the island, and separate the two plateaux.

Rhum (fig. 4) is geologically the most complex of the Small Isles, and by far the largest, with an area of 26,400 acres (over 40 square miles). It extends both north-south and east-west for about 8 miles, though there is one important inlet, the sea loch L. Scresort. The island is mountainous, with little low-lying land except near the mouths of the glens of Harris,

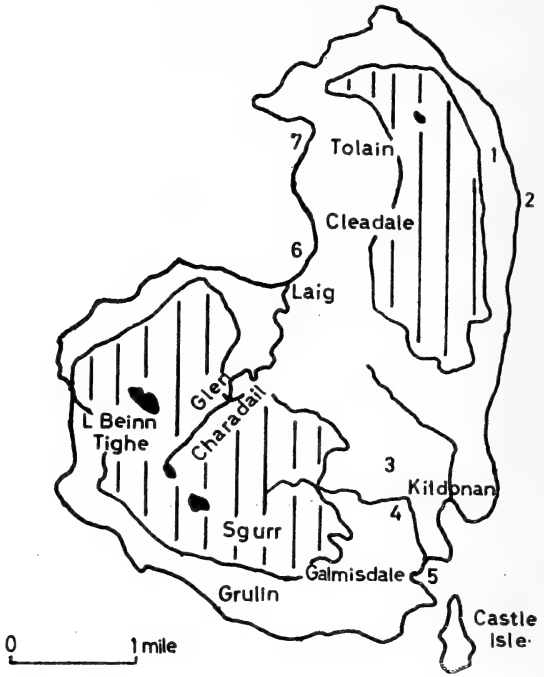

FIG. 3. Isle of Eigg. Figures indicate the following localities: 1 Sron na h'Iolaire, 2 Rudha nam tri Clach, 3 Kirk, 4 Manse, 5 Pier, 6 Laig Bay, 7 Camas Sgiotaig.

Kilmory and Kinloch. In the tertiary era it was a volcanic centre, and the surface rocks are of three main types: Torridonian sandstone in the north and northeast, mainly below 1200 ft; granite in the northwest, rising to 1800 ft on the scarp of Orval; and ultrabasic rocks, which form the southern peaks (including three about 2500 ft) from Ainshval to Barkeval. In contrast to the other three isles Rhum has not been cultivated extensively since the mid 19th century, when it was turned over to sheep and deer 'forest'.

Canna (fig. 5) is a long narrow island, shaped like an hourglass, and formed chiefly of tertiary basalt lava flows. The surface of about 2500 acres (some 4 square miles) is dominated by two plateaux of over 500 ft, separated by a narrow area of low fertile ground at Tarbert. In the southeast of Canna is another area of good arable land on the raised beach, up to ½ mile wide, and sheltered from the direct force of the SW winds by the islet of **Sanday**, to which Canna is connected by a footbridge. Sanday has an area of about 500 acres (less than one square mile) and only one important hill of nearly 200 ft in the southwest corner; it is a fertile

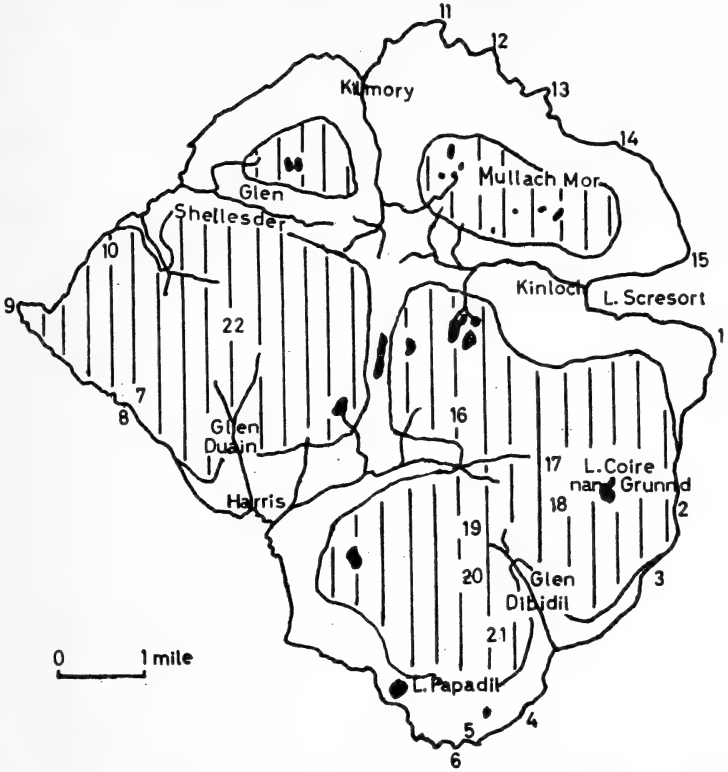

FIG. 4. Isle of Rhum. Figures indicate the following localities: 1 Rudha Port na Caranean, 2 Welshman's Rock, 3 Allt na Ba, 4 Sron na h'Iolaire, 5 Sgor Mor, 6 Rudha na Meirlach, 7 Sgor Reidh, 8 Cave Bay, 9 a'Bhrideanach, 10 Bloodstone Hill, 11 Rudha Shamhnan Insir, 12 Rudha na Moine, 13 Rudha Camas Pliasgaig, 14 Creag na h'Iolaire, 15 Rudha na Roinne, 16 Barkeval, 17 Hallival, 18 Askival, 19 Trallval, 20 Ainshval, 21 Sgurr nan Gillean, 22 Orval.

island. The natural harbour between Sanday and Canna provides a safe anchorage from most Atlantic storms.

The Small Isles, like Coll and Tiree (Boyd 1958), are dominated by a warm, moist SW airstream with associated high winds, though in recent years cold easterly and northerly winds have become more common, particularly in spring. Rainfall is high, especially on Rhum, where over 100 inches a year may fall on the peaks; the average on Canna is about 50 inches a year. Temperatures vary rather little over the year: on Canna, for example, the mean temperature in January is about 40°F, and in July only 15°F higher. As a result it is seldom very hot in summer, and winter snows seldom lie for more than a few hours except on the mountain peaks of Rhum.

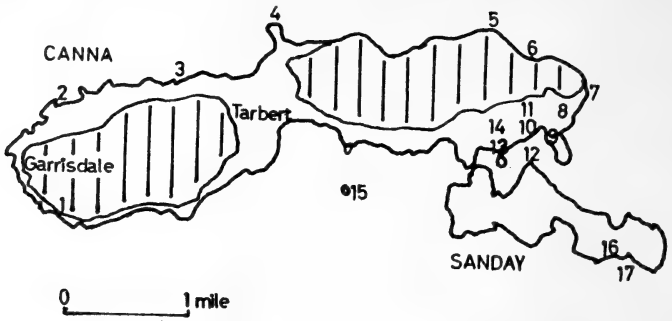

FIG. 5. Isles of Canna and Sanday. Figures indicate the following localities: 1 Bre Sgor, 2 Conageraidh, 3 Cumha Chalain, 4 Rudha Langanes, 5 Bod an Stoil, 6 Laum Sgor, 7 Compass Hill, 8 Coroghan, 9 Kirk, 10 Canna House, 11 Tighard, 12 Harbour, 13 Square, 14 A'Chill, 15 Haslam, 16 Easubric, 17 Dun Mor.

The habitats

1. Sea cliffs. All the cliffs on Muck are less than 200 ft high; the most important for breeding seabirds are those of Fionn-Ard and An Liachdach which lie on the east side of the bay of Camas Mor. Off the northwest coast of Muck stands Horse Island (Eilean nan Each) and the stack of Eagamol; both have cliffs of 100 ft or more, those on Horse Island facing west and north. The cliffs of Eigg which fall straight into the sea are restricted to the southwest and, more particularly, to the west coasts. Most are less than 200 ft high, though those due west of L. Beinn Tighe reach almost 500 ft. There are a few smaller cliffs near Kildonan and these have recently been colonised by Jackdaws. Off the southeast corner of Eigg lies Castle Isle, bounded on several sides by 50 ft cliffs.

Much of the coast of Rhum is cliff-bound. The highest cliffs are those of Bloodstone Hill (about 1000 ft) and a'Bhrideanach in the west, the steep western screes of Sgor Reidh, and the southeastern cliffs between Papadil and Welshman's Rock, all well over 200 ft. Canna also has high cliffs, especially on the northern side of the eastern plateau, where they reach 500 ft, and on the southern side of the western plateau. The cliffs of Sanday are much lower but there are some of over 50 ft at Easubric near the stack of Dun Mor in the southeast of the islet.

It is noticeable that most of the large colonies of seabirds which nest on open cliffs are confined to those facing north, east or southeast. Presumably other directions receive much more of the impact of the Atlantic storms, particularly during early spring when nest sites are being prospected; this may explain in part why Eigg, with west-facing cliffs, has

such a poor seabird fauna, for no Kittiwakes, Guillemots, Razorbills or Puffins breed there, and Fulmars have only recently colonised. Open cliff nest sites are used by some of the Shags which breed in the Small Isles, but the largest colonies are in caves and under large boulders at the cliff bottoms. Other important sea-cliff nesters are the raptorial birds; it is notable that several of the eyries formerly occupied by White-tailed Eagles have now been taken over by Golden Eagles.

2. Sand and shingle beaches. These form the other major coastal habitat (apart from low rocky shores, which, though important, for example, to nesting Common Sandpipers, Herring Gulls and Rock Pipits, will not be detailed further). On Muck, sand is confined chiefly to the bays of the north coast, while on Eigg there are extensive sandy bays at Laig, Camas Sgiotaig (the famous 'singing' sands) and Kildonan; on the south shore of Laig Bay there is also some shingle. Rhum, in spite of its lengthy coastline, has only two moderate stretches of sand—at Shamhnan Insir and Kilmory; the latter beach is backed by pebbles, which also form the entire beach at Harris; at Kinloch there is some muddy sand and shingle. Canna has small sandy bays at Tarbert and Conageraidh, and there is a fine shell-sand beach, backed by a small area of machair, at the northwest corner of Sanday. The sand and shingle habitats are important chiefly for nesting Ringed Plover and Shelduck, and for waders on passage.

3. Inland cliffs. Those on Muck are low, and more aptly described as terraces. Eigg, however, has not only the outcrop of the Sgurr, but also a most impressive horseshoe of cliffs to the east of Cleadale; these form the western scarp of the northern plateau. This plateau also has an eastern scarp, but the sheer part of the cliffs there is less high than on the western side. On Rhum there are many low inland crags, but important inland cliffs are chiefly on Orval and the higher parts of the southern peaks. Canna has inland cliffs (and boulder scree slopes below them) along the southern edge of the eastern plateau, and at the east and west ends of the island. The eastern cliff, Compass Hill, contains enough magnetic rocks to affect a compass reading appreciably. The inland cliffs form important nesting habitats for raptors and corvids.

4. Fresh water. Muck holds no extensive areas of fresh water, but there are several small lochans largely covered by bogbean, and some small sluggishly-flowing burns bordered by yellow flag. Eigg, in contrast, has several small lochs on the high plateaux, and these contain some open water at all times of year, except when frozen; there is also a small pond at Laig, where Moorhen and Little Grebe have

bred. The burns on Eigg flow fast, often over waterfalls, but those flowing into Kildonan and Laig bays (especially Laig burn, from Glen Charadail) slow down as they cross the flat arable land; this allows a good growth of vegetation on the banks. On Rhum, however, almost all the burnsides are bare, and most of the streams flow fast over rocky beds; it is alongside these that Dipper, Grey Wagtail and Common Sandpiper nest. Rhum supports many high-level lochans, particularly in the centre of the island and in the northeast between the sandstone outcrops of Mullach Mor. As on Eigg, these contain brown trout, and form the chief haunt of the Red-throated Divers. One Eigg lochan also contains introduced rainbow trout. Canna has no permanent standing water, and many of the streams which run off the two plateaux flow only after wet weather. On Sanday, however, a lochan which had been drained was recreated in the early 1950s, and this now holds a lush growth of *Phragmites* over much of its surface; Mallard and Reed Bunting breed there, as in similar areas on Eigg and Muck.

5. Woodland. There are three small plantations on Muck, planted in the years 1928-32; they lie in the centre of the island, near Port Mor, and near the Square respectively. All contain conifers and mixed deciduous trees of up to ten species. In addition to these plantations there are tall *Escallonia* hedges and a few scattered trees in the gardens; also some patches of willow bushes along the burns.

The woodland on Eigg is well established, and concentrated at the southeast corner of the island, where it receives most protection from the Atlantic storms. There is a small plantation round the ruined chapel of St Donan at Kildonan, but more extensive woodlands between Galmisdale and the Kirk. There are conifer, deciduous and mixed plantations of considerable height, with tall undergrowth in the more open parts; most were planted in the 1920s.

The natural tree cover of Rhum had been destroyed by the early 1800s, except in some of the deep gorges cut by the burns, but a small planting of sycamore, beech and ash was made at the head of L. Scresort in the 1830s, and much more extensive planting at the turn of the century. As a result of these plantings there is well-grown mixed woodland around Kinloch, and small plantations on the shores of L. Scresort, chiefly conifer on the north side but mixed on the south. There is also a small plantation at Papadil. There has been a marked growth of understorey and much natural regeneration in the Kinloch woodland since the repair of the deer fence surrounding the Castle grounds in 1958. Since 1959 the Nature Conservancy has undertaken a programme of tree

planting, so that marked changes in the distribution and abundance of certain bird species may be expected in the future. This is particularly true of the northeast of Rhum, where about 1400 acres were enclosed with a deer fence in 1962 and planting is in progress.

Canna also supports several plantations. Pines were planted on the side of a gully north of Coroghan in 1911, and sycamores, wych elms and ash at Canna House, and near the Kirk, at about this time. The larch plantation east of Tighard and the mixed deciduous trees round Tighard and on the slopes down to Canna House were also established in the early 1900s. More recently the present owner of Canna, Dr J. L. Campbell, has afforested the slope between the larch and pine plantations, and has planted other areas just north of the Square with a mixture of deciduous trees. Smaller areas near Coroghan have also been planted with a mixture of pines, larches and deciduous trees.

Relics of the oak-birch-willow-aspen scrub which covered part of these islands in past centuries may still be found on the cliffs of Rhum, Eigg and Canna. There is also natural hazel scrub in some of the steep-sided gullies on these islands.

The woodlands are particularly important as nesting habitats for the passerine species found on the Small Isles, and certain of them, such as Blackbird, Robin and Dunnock, are much more closely confined to the woodlands than is usual elsewhere in Britain. Important non-passerines to take advantage of the plantations, particularly the conifers, have been the Woodpigeon and Long-eared Owl.

6. Ground vegetation. The areas of natural or semi-natural vegetation may be divided broadly into three categories: acid moorland, poorly drained; *Calluna* heath; and grassland with bracken. Muck is covered by grassland with some bracken, and there is no deep growth of heather. In contrast, Eigg has extensive tracts of boggy moorland on the two plateaux, but only small areas of *Calluna* heath, chiefly (as on Canna) on the steep and better-drained slopes. The grassland zone forms a buffer between the cultivated land and the moorland, especially to the south of Laig and north of Galmisdale and Kildonan; it also forms the chief vegetation type of the low-lying land which runs northwest-southeast across the centre of Eigg. Bracken is widespread, especially on the moorland edge, and small bushes, chiefly willow and hazel, are found in some areas. Much of Rhum is covered by boggy moorland, and the areas of *Calluna* were severely reduced, prior to the Conservancy's acquisition of the island, by burning and grazing; since this stopped, the stock of Red

Grouse has increased slightly. In many areas grasses (particularly *Molinia*) are dominant, but bracken is not abundant, except at Kilmory and on the southern shore of L. Scresort. On the mountain tops the plant communities are closely allied to the arctic-montane type. The two plateaux of Canna are covered principally by acid moorland; there is only a small depth of peat. The slopes between the terraces (presumably successive lava flows) are dominated chiefly by *Calluna*, but in no part of the island does this reach great height. The rest of the island—the lower terraces and the raised beaches—and most of Sanday, are covered by grassland. As on Eigg, bracken is restricted chiefly to the moorland edge. The floras of the islands were studied in detail by Heslop-Harrison (1939); and an up-to-date list of the plants of Rhum has been published recently by Eggeling (1965).

Ground-nesting species are relatively few. Of the passerines, Skylarks keep mainly to the grassland areas and Meadow Pipits to the heather and better-drained moorland. There is also segregation in habitat preference between the Lapwing and Snipe, the former preferring short grassland, the latter low-lying wet moorland.

7. Cultivated land. The extent of cultivated land on Muck has changed only slightly this century. The chief crops are oats, potatoes, cabbage and turnips; hay is cut as a crop, but none of the meadows has been ploughed and reseeded. Few vegetables are now grown on Eigg, and most cultivated areas are devoted to oats or hay. The number of crofting areas under cultivation has dropped considerably this century, especially at Tolain. Only a very small acreage is farmed on Rhum, at Kinloch. In contrast, over 200 acres are farmed on Canna and Sanday, most by the island farm but some by the croft owners, especially on Sanday. Potatoes, oats and hay are again the chief crops. There has not been much change this century in the area under cultivation on Canna, though before the evictions early in the 19th century it is recorded that about 450 acres were cultivated. While the total acreage of oats and hay on the Small Isles has been reduced somewhat over the last 50 years, the Corncrake and Corn Bunting populations have decreased much more drastically, the latter to extinction. Other factors such as mechanisation of cutting, and possibly higher rainfall, must have played their part.

8. Buildings. Little trace now remains of the crofts which were occupied when the island populations were at their highest in the early and mid 1800s, but there are many derelict buildings still standing as a reminder of more recent depopulation. The buildings on Muck are grouped round

Port Mor and on the north coast; there are also ruins of an old village occupied before the evictions. Most of the inhabitants of Eigg live at Cleadale, with smaller numbers at Galmisdale and Kildonan. The settlement at Grulin was abandoned in the last century, and little remains there now. Before the evictions in the 1820s the population of Eigg rose to more than 500, but it now numbers less than 70. On Rhum all the inhabited buildings are now at Kinloch, but there are still cottages in fair repair at Harris and Kilmory. At the time of Pennant's visit in 1772, over 300 people were living in nine hamlets on Rhum, but almost all were evicted in 1826 and emigrated to North America; the population is now between 35 and 40. The inhabitants of Canna and Sanday all live in cottages and houses grouped round the natural harbour, but the shepherd's house at Tarbert has been uninhabited for only about ten years. At the time of Pennant's visit the population was over 200, but most were evicted in 1851, and the present population numbers just under 30. Buildings, both inhabited and ruined, provide nesting sites for a small group of passerine species, but the only one of note is the Tree Sparrow on Canna (and Eigg, perhaps); there would seem to be many suitable sites for Swallows, but only on Eigg are they used regularly.

Mammals of the Small Isles

The mammals of the four islands are of interest in that they may either prey upon the bird populations, particularly while these are nesting, or they may provide a source of food for birds of prey, owls and (when dead) corvids. Of the smaller mammals, all four islands support populations of pygmy shrews *Sorex minutus* and long-tailed fieldmice (or wood mice) *Apodemus sylvaticus*. Short-tailed voles *Microtus agrestis* are present only on Muck and Eigg (which has the highest Kestrel population in the Small Isles); and house mice *Mus musculus* at least on Canna, but not on Rhum. Brown rats *Rattus norvegicus* occur on all four isles and do considerable damage to some of the breeding seabird colonies. Rabbits *Oryctolagus cuniculus* are present on Eigg and Canna (where most of the Buzzards breed), but not on Muck and Rhum, while brown hares *Lepus europaeus* are absent from all four islands; the last blue or mountain hare *Lepus timidus* was shot on Rhum in 1917. Red deer *Cervus elaphus* are still numerous there, with about 1500 head counted in spring. Otters *Lutra lutra*, formerly persecuted on Rhum, are now seen on all four islands, and grey seals *Halichoerus grypus* breed at the west end of Canna and a few also on Muck.

Among the domestic animals, Muck supports a herd of 60

cattle and 500 sheep; Eigg has few cattle but many sheep; Rhum had sheep until 1957, but now has only a few dairy cattle and (as on Canna) about 150 feral goats living on the cliffs. Canna, which had only cattle in the 18th century, now has two large flocks of sheep and a fine herd of Highland cattle. Rhum supports a small herd of Rhum ponies, an island stud of long standing.

Other mammals have occurred in the Small Isles, but only in small numbers; none is particularly relevant to the bird populations.

The bird populations

The systematic list which follows summarises all bird records which have come to our notice up to 31st December 1966. Authorities for records are rarely quoted in the text, but from their dates the observers may be traced through the list in the Appendix. Where dates do not coincide with any period of observation listed there, the records were made or collected by Mrs E. McEwen of Muck; D. Ferguson, Dr H. I. C. Maclean, Lord Runciman and Sir Steven Runciman of Eigg; Dr W. J. Eggeling and P. Wormell (Chief Warden for the Nature Conservancy) of Rhum; and Dr and Mrs J. L. Campbell of Canna. We are most grateful to these people for allowing us to make use of their researches and observations, as also to those listed in the Appendix who transcribed their unpublished observations for us in response to requests for information in *Bird Study*, *British Birds* and *Scottish Birds*.

The records in the systematic list are given first for the isle of Rhum, then for Eigg, Muck and Canna, since those from Rhum are the most comprehensive for the ten-year period to December 1966, and thus provide a baseline against which to evaluate the records available from the other islands. Until the Nature Conservancy took over the management of Rhum in 1957, most observations on all four islands were concentrated in the summer months, when visiting ornithologists spent short holidays in the area; winter records were much less numerous, and often concerned only with areas close to the main settlements and farms. Such limitations, particularly of pre-1957 records, should be kept in mind when assessing the information which follows. To save space in the systematic list, if no records of a species are available for a particular island the initial of the island is omitted.

SYSTEMATIC LIST

Black-throated Diver *Gavia arctica.* **E** Singles June 1913 and July 1939.
M Occasionally seen offshore in winter.
C One June 1930.

Great Northern Diver *Gavia immer.* Regular winter visitor to all isles, chiefly November-May.
R Some pass north in late April and May. Up to 4 stay in L. Scresort until early June most years; one late June 1950.
E Passage birds noted in May. One August 1960.

Red-throated Diver *Gavia stellata.* **R** No mention in late 19th century; persecuted and probably not breeding 1934. One nest 1950; thereafter at least 3 nests most years (6 in 1958), mainly on the hill lochs of Mullach Mor. Eggs sometimes taken by Hooded Crows.
E Pair present on lochs near the Sgurr in some summers, but no proof of breeding until 1964.
M Summer visitor offshore.
C Two seen offshore in June; one shot in winter.

[**Slavonian Grebe** *Podiceps auritus.* **E** Evans's record of remains found in 1884 was rejected by the Macphersons.]

Black-necked Grebe *Podiceps nigricollis.* **R** One at Kilmory 15th March 1960.

Little Grebe *Podiceps ruficollis.* **R** "Well known" in 1871 (Gray), but most unlikely to have nested. Three records September and October on L. Scresort, one on L. Papadil, all since 1960.
E One pair has bred regularly at Laig since first recorded 1947, but not seen July 1964.
C Occasional winter visitor in 1930s in the harbour. One in 1956 after SW gale.

Leach's Petrel *Oceanodroma leucorrhoa.* **R** Specimens from Rhum received by Gray before 1871; also breeding colony reported at a'Bhrideanach, but no trace in 1881, nor on three visits between 1955 and 1962.
E C Single specimens from each island received by Gray before 1871.

Storm Petrel *Hydrobates pelagicus.* **R** Gray (1871) thought they bred, but no supporting evidence.
E Gray thought they bred but record rejected by Macphersons. One seen ½ mile inland July 1955; several offshore July 1962.
M Occasionally seen offshore.
C Reported as breeding by Gray but no confirmation. Occasionally seen July and August; one calling from rabbit burrow near Dun Mor, Sanday, June 1965. Seen over Humla Stack July 1928 and August 1959.

Manx Shearwater. *Procellaria p. puffinus.* **R** Recorded breeding 1716 and all subsequent visits. In 1889 the main colony was reputed to be on the Harris side of Trallval. In 1950s Bourne believed that the colony numbered hundreds of thousands along the main Barkeval-Hallival-Askival-Trallval ridge, but more recent study indicates this was an overestimate (P. Wormell *in litt.*). Reported absent from Ainshval and Sgurr nan Gillean in 1934, but present then on NW sea cliffs of Bloodstone Hill and Cave Bay. In 1950s several observers noted absences from these cliffs, though in 1959 a few flew inland calling towards Orval and in 1960 an occupied burrow was found on Bloodstone Hill. In the main colony, nests everywhere above 1500 ft. In 1950, 1955 and again 1965, 1966, nests were found down to 750 ft in Glen Dibidil and above Kinloch. Recoveries of birds ringed on Rhum, particularly on Hallival, are shown in fig. 6.
E Recorded breeding 1871 and thereafter. In 1886 a few bred in cliffs above Laig beach and village, and others above Cleadale and in NE cliffs.

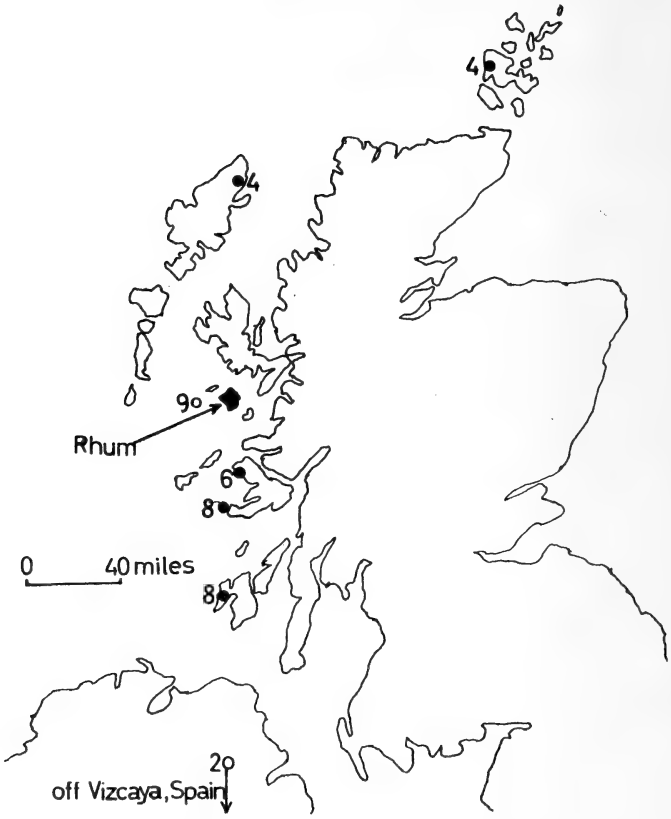

FIG. 6. Recoveries of Manx Shearwaters ringed on Rhum. Open circles, ringed as nestlings; filled circles, ringed as full-grown. Figures denote months of recovery; the three autumn recoveries occurred in the year the birds were ringed, but spring recoveries were in later years only.

By 1890s the colony stretched from Laig via Cleadale to Rudha nam tri Clach on NE coast--along 5-6 miles of cliff. Whether this represents an increase or merely more extensive observations is not known. The extent of the colony was maintained until 1930, though by then burrows were higher up the cliffs than before. In 1949 few chicks were reared, at least partly because of rats. Apparently otters also used to go to the hilltops in spring to eat shearwaters in the burrows. By 1950s the colony was confined to cliffs above Cleadale and Tolain, and the decrease continued. For example, in 1955 and 1957 there were perhaps only 100 prs and many of the burrows were occupied by rats; in 1964 the estimate was less than 50 prs. The island is no longer a big Manx Shearwater station (*contra* Darling & Boyd 1964).

M None breed, but regularly seen offshore.

C Large colonies reported along S crags near the road to Tarbert in 1933. Estimates in 1960s indicate hundreds, possibly thousands, of pairs there, nesting down to 100 ft. Colonies also reported from E half of N cliffs in

1887 and 1930s, and from W half in 1948, but no recent confirmation. In 1962 apparently absent from Compass Hill, though they have been heard at night in that area.

Sooty Shearwater *Procellaria grisea.* **R** Single birds offshore August 1961 and 1962.

Fulmar *Fulmarus glacialis.* **R** 22 prs near Dibidil in 1934, increasing to 250+ prs 1955. A new colony near Welshman's Rock held 25 prs 1950, 75 prs 1960. Birds prospected N cliffs in 1961.
E First seen on cliffs W of Grulin 1940, but no proven breeding until 1963, though occupied sites noted July 1953. These cliffs are more exposed to Atlantic storms than those occupied on the other islands.
M First prospected Horse Island June 1930. In 1934 6 prs at Fionn-Ard, but no proven breeding Horse Island. A rapid increase to c. 100 prs in late 1940s. In late July 1963 c. 40 occupied sites at Fionn-Ard and c. 50 on Horse Island; presumably many more sites had been occupied earlier in the season.
C First established on Sanday in 1930. Birds began to prospect N cliffs of Canna, W of Bod an Stoil, in 1935, and occupied sites in 1936. Many records refer to different months in different years, so impossible to trace accurately the expansion of these colonies. Sanday had 21 occupied sites on 31st July 1946, and a similar number has survived till this part of the breeding season in most years since then, though up to 40 sites have been occupied in early June. The N cliffs colony had c. 150 occupied sites in June 1939, but few young reared. In late June 1963 at least 85 occupied sites, and a steady increase noted in young reared. This colony needs to be surveyed from the sea in future years.

Gannet *Sula bassana.* Regular offshore June-October, all islands.
R Monro (1549) wrote "many Solan Geese were taken in abundance in the high rocks," but it is difficult to imagine where. Possibly he meant Manx Shearwaters (Munro 1961). Gannets follow mackerel shoals to entrance of L. Scresort, especially in July and August.
E Monro (1549) wrote "there are many Solan Geese in Egga" but Harvie-Brown did not believe the statement; see also Munro (1961).

Cormorant *Phalacrocorax carbo.* Gray (1871) reported breeding on Rhum, Eigg and Canna, but no later confirmation; regular visitor to all four islands.
R Small numbers offshore, chiefly July to September.
E Scarce in summer, more common in winter.
M Seen more frequently in recent years, probably from the colony on Ardnamurchan.
C The Joint Schools Expedition (Anon. 1948) record of breeding at Garrisdale must have referred to young Shags. Recorded chiefly in winter.

Shag *Phalacrocorax aristotelis.* **R** Large numbers in W caves in 1881. Colonies in 1930s between Dibidil and Papadil, and at Rudha Shamhnan Insir. In 1950s the former colonies held up to 100 nests in several places, whereas the N colonies numbered less than 25 prs. In 1961 new colonies were established at Kilmory, Rudha na Roinne and below Sgor Reidh. A ringing recovery is shown in fig. 7.
E Common breeding bird both in caves and on cliffs in the S and W, and on Castle Isle. In 1958 several hundred pairs must have bred, and a raft of 200+ birds was seen offshore in August.
M 4-6 prs 1934. Marked increase by 1963 when c. 70 nests on Horse Island, Eagamol and Fionn-Ard cliffs.
C Large breeding colonies at W end, and below N cliffs; the former lies under large boulders below Garrisdale and Bre Sgor cliffs; a few hundred pairs nested there in the 1960s. On the N side, another colony under boulders lies below Laum Sgor, whereas colonies W of Bod an Stoil are

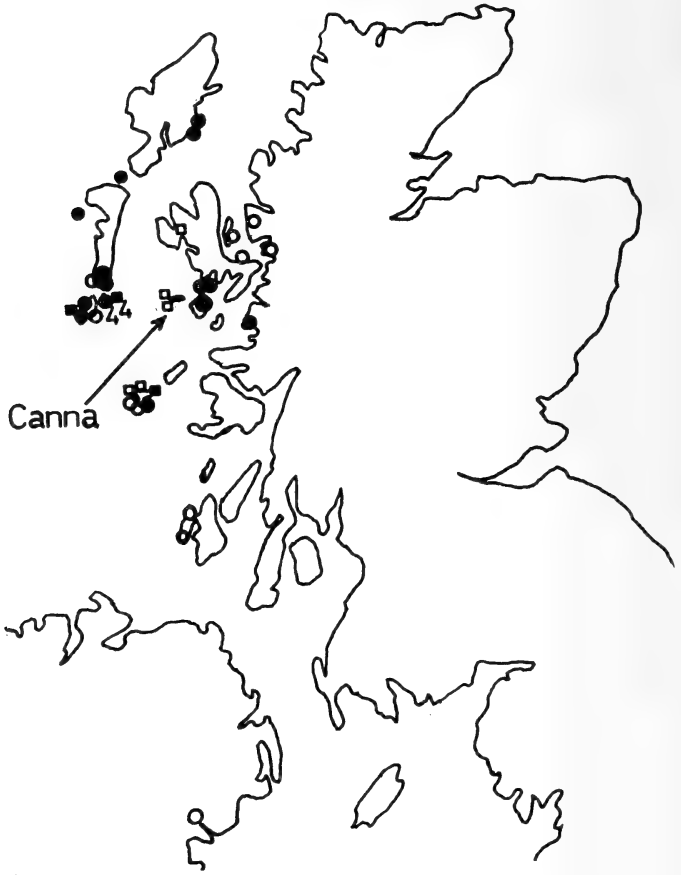

FIG. 7. Recoveries of Shags ringed as nestlings on Canna. Circles denote birds recovered in their first year of life, squares those recovered in later years. Filled symbols show birds recovered July-December, open symbols January-June. The figures beside the recoveries on Eriskay indicate that four birds of each age group were recovered there.

chiefly on open cliff sites. A few pairs nest on cliffs on Sanday (at Easubric) and in NW Canna at Cumha Chalain. In 1961-65, 440 nestlings were ringed at Garrisdale; the 40 recoveries are shown in fig. 7. Only 10 refer to Shags more than one year old; mortality is evidently very heavy in the first winter. In the dispersal after fledging, longer movements occur chiefly in a southerly direction; recoveries tend to be nearer Canna in the first autumn than in the following spring, so birds may not return to their home area when one year old, but only in later years.

Heron *Ardea cinerea.* **R** A cliff nest in 1869. Since then no breeding recorded until 1960 when 4 prs nested in wood on N side of L. Scresort. Two pairs reared 5 young 1963, but eggs taken by Hooded Crows 1964. **E** Pair nested on NW cliff 1882; small heronry near Manse 1926, but not thereafter, though winter roost of up to 30 in this wood in 1930s. One

nest there 1955-57, and one near the Lodge 1962. Non-breeding birds seen frequently in summer.
M Pair nested regularly 1955-64 in middle plantation, and two pairs 1965-66. The first clutch is often taken by Hooded Crows, and young may be in the nest until July.
C No breeding records, but up to 15 by Sanday lochan in late summer.

Spoonbill *Platalea leucorodia.* **C** Two November 1907.

Mallard *Anas platyrhynchos.* **R** A few recorded 1796. Reared and released at Kinloch in 1920s. A very few pairs have bred in many years in various localities. Winter flock of up to 12 assembles in October.
E Many reported to have bred on lochs near the Sgurr 1871-90. First bred Laig pond 1909. Since 1930s only 1-2 prs breed, but numbers increase in winter.
M About 8 prs bred in 1963. Breeds regularly; some winter on the sea.
C Before 1914 bred on both Sanday and Canna. Recently one pair has bred by Sanday lochan each year. Winter flock of up to 20.

Teal *Anas crecca.* **R** Bred Glen Shellesder 1965 and 1966. Otherwise recorded regularly since 1957, small numbers, chiefly in autumn.
E Regular winter visitor 1880s; now only occasional.
M Occasional winter visitor, up to 8; seen more often in recent years.
C Scarce winter visitor; also one Sanday lochan 8th August 1964.

Wigeon *Anas penelope.* **R** Drake November 1963 and three 31st January 1965.
M 12+ prs winter 1964/65.
C One January 1957.

Pintail *Anas acuta.* **C** Four April 1935 and four October 1938.

Scaup *Aythya marila.* **C** One February 1956.

Tufted Duck *Aythya fuligula.* **E** One shot before 1933.

Goldeneye *Bucephala clangula.* **R** Seven winter records, all since 1958; maximum 5 birds, staying up to one month.

Long-tailed Duck *Clangula hyemalis.* **R** One November 1957.
M 4-6 prs winter 1955/56.

Velvet Scoter *Melanitta fusca.* **R** One October 1957.

Common Scoter *Melanitta nigra.* **R** Pairs offshore August 1958 and June 1963.

Eider *Somateria mollissima.* **R** Increased from few pairs in 1880s to many in 1934, especially in L. Scresort and on NE coast. These are still favoured breeding areas, though odd pairs also found along most of the coast where no cliffs. Young are heavily predated by gulls; in some recent years few have survived.
E Bred on Castle Isle from 1880s onwards; small numbers only, c. 20 prs 1933. On main island bred in 1950s round the bays at Kildonan, Laig and Camas Sgiotaig; at least 8 prs April 1962.
M Very few nesting 1890, but c. 30 prs 1963. By late 1940s also nested on Horse Island and Eagamol.
C More common than on Rhum in 1880s (though less than on Hyskeir). Now fairly common along S coast Canna, round the harbour, and at Garrisdale in most years, but less than 100 prs. In 1960s nests also found at Rudha Langanes, and on Haslam and Sanday.

Goosander *Mergus merganser.* **E** One seen 1965.

Red-breasted Merganser *Mergus serrator.* **R** Used to be persecuted, but bred 1934 at Camas Pliasgaig and L. Scresort. At latter site, 1-2 prs breed regularly now; in 1961 also a pair at Kilmory. Often seen in winter.
E Occasionally nested 1890s; since then at least one pair has bred most years, and 3 prs 1933.

M No breeding records; often 2 prs in winter.
C Up to 12 in harbour, chiefly in winter. Occasional June and July.

Shelduck *Tadorna tadorna.* **R** 3 prs used to breed before 1910; no proven breeding thereafter until one pair at Rudha na Moine 1959 and at Kilmory 1965, 1966.
E Supposed to have bred E side 1882 and on Castle Isle 1884. Now 2 prs seen each year by the pier, and at least one of these nests at Kildonan; a pair seen on Castle Isle 1962.
M Said to have bred 1871, but only one seen 1934. Increase to 5-6 prs 1963; young often predated by gulls.
C Persecuted and no proven breeding 1880s. One pair Garrisdale 1933, 2 prs 1956. Bred 1960 at Tarbert, on Sanday and by the harbour. Four prs present 1963 and 4 broods raised 1965, including one at Garrisdale.
Grey Lag Goose *Anser anser.* **R** Fairly regular passage migrant, NW in April and SE in October. One June 1934; one wintered at Kinloch 1958/59 and two 1963/64.
E 'Grey' geese shot at Laig in winter during 1880s; one shot in winter 1942.
M Occasional on passage or in winter; often pairs.
C Fairly regular passage migrant April and September. One 7th August 1964 may have summered; occasionally winters.

White-fronted Goose *Anser albifrons.* **R** Occasional on passage April and October; numbers up to 30. One of Greenland race identified October 1957.
E Three November 1951.
M Up to 20 most winters.

Pink-footed Goose *Anser arvensis brachyrhynchus.* **E** Three November 1950.
C Single birds June 1925 and 1962.

Brent Goose *Branta bernicla.* **R** About 30 at Kinloch 18th April 1965.
M About 6 over the last 25 years.
C Six May 1935 and one October 1952.

Barnacle Goose *Branta leucopsis.* **R** Two flew S August 1962.
E One at Kildonan 1932/33.
M Regular winter visitor, up to 24.
C One shot 1890s, nine January 1933, two August 1959.

Canada Goose *Branta canadensis.* **R** 12 on L. Scresort 9th June 1966.

Mute Swan *Cygnus olor.* **M** Regular winter visitor, 2-5 birds.
C Occasional winter visitor; also one July 1958.

Whooper Swan *Cygnus cygnus.* Recorded on passage in varying numbers from all four islands.
R Northward movement late March and first week April; return passage late October and November (maximum 22 together, October). Eight remained until mid June and an immature stayed at Kilmory July and August 1957; one Glen Shellesder June 1962.
E Fairly regularly winters in small numbers.

Golden Eagle *Aquila chrysaetos.* **R** Until 1886, at least 5 prs bred. Persecution thereafter kept down numbers, and possibly none nested successfully until early 1950s. Since then at least 2 prs have laid each year, with up to 4 prs present.
E Until 1927 an occasional visitor from Rhum or the mainland. Breeding proved at Sron na h-Iolaire 1930 and thereafter. In 1955 and 1956 a second pair nested on SW cliffs, but this eyrie has been tenanted only irregularly since.
M First seen mid 1950s. Nest built 1956, but breeding not proved. The pair disappeared in 1958 or 1959.

C Occasional visitor until 1935, when pair seen in April. One pair on NE cliffs in 1940s and 2 prs from 1953, with second pair in W half of Canna. The female of this pair was found dead on the nest May 1964, but 2 prs again in 1966.

Buzzard *Buteo buteo.* **R** Breeding recorded only in 1950 and 1955 (there are no rabbits on Rhum). In recent years occasional birds have been present in winter, September-May; 6 in October 1958.
E Until 1891 only one pair, but increased to 6 in 1909, 7 in 1926. After this, numbers probably 'controlled' somewhat, for population fluctuated from 1-5 prs during 1930s, and some young killed. Very few young reared 1955-57, after myxomatosis had removed most of the rabbits. Since then at least 3 prs each year, mainly on Cleadale cliffs.
M One pair for many years, but only one bird 1963; bred again 1965, and 3 young reared.
C 4-6 prs recorded June 1933, and good numbers 1948 (though this count must have included some young birds). Directly after the myxomatosis outbreak in 1956 no sign of breeding, but since 1961 pairs have bred on Compass Hill and two along S crags towards Tarbert.

Sparrowhawk *Accipiter nisus.* **R** Old nest found 1934. Seen most winters and springs in late 1950s; bred 1959 and possibly also 1962. Since then 1-2 birds have regularly frequented Kinloch woods.
E Rare visitor from the mainland in the late 19th century. Five shot in five weeks about 1932. Has nested occasionally in recent years.
C Rare visitor on passage.

White-tailed Eagle *Haliaetus albicilla.* **R** Seen 1772. Eight killed 1866, and only one pair 1898-99. Last nested 1907 at a'Bhrideanach, where the last bird was shot 1911 or 1912.
E Three eyries occupied, one on precipice below the Sgurr, from 1750 to at least 1833. Last nested Cleadale 1877. One shot 1886.
C Last pair bred NW cliffs 1875; one shot 1879. Immatures seen 1902, 1920.

Hen Harrier *Circus cyaneus.* **R** One March 1962; four records August-December 1964 and 1965.
E Three records July-December, all since 1957; males spring 1965 and 1966.
M One February 1962, flew off towards Rhum (see above).
C One November 1936.

Peregrine *Falco peregrinus.* **R** None 1934, but 2+ prs in 1950s. Only one pair bred 1960-62 and regularly thereafter, but second pair sometimes present.
E Two eyries 1879, increasing to 3 or 4 in 1891. Thereafter only one pair, except 1939 when 2 prs. No proven breeding in 1950s, though pair present until 1958.
M One pair nested 1549; bred regularly until 1941 when one bird died; the other remained 10 years. Now only occasional visitor.
C Pair nested 1549; persecuted, but still one pair 1900; two eyries occupied 1933 and thereafter to 1962. Only one pair 1964 and 1965.

Gyr Falcon *Falco rusticolus.* **M** One in garden about 1953 (same year as recorded in Mull); probably of Greenland race.

Merlin *Falco columbarius.* **R** One pair seen 1934 and has bred most years since 1957 in Glen Shellesder; second pair Glen Duain 1958.
E Pairs seen 1953 and 1962, but no proved breeding.
C Occasionally seen in summer and autumn. A pair in early August 1962 may have come from Rhum.

Kestrel *Falco tinnunculus.* **R** Few records before 1955, when 2 prs bred. At least 4 prs 1959; breeding not noted 1962 or 1963, and perhaps only one pair successful in other years since then.

E The most abundant bird of prey in 1891. About 8 prs in 1933, but fewer reported in recent years; however, records of 1-2 prs are probably underestimates, and 3 prs seen 1964. Nests on the Cleadale cliffs.
M None 1934; one pair breeds regularly now.
C One pair 1930s and 1940s but no proved breeding in 1950s. At least one young reared 1962, and one pair 1963, 1964.

Red Grouse *Lagopus lagopus scoticus.* **R** Seen 1772; common 1871 and 1889, when c. 200 prs introduced to augment the stock. Only 6-10 adults seen 1934, and numbers have probably never risen much above 50 at the end of a breeding season in recent years, though a slight increase may have taken place with the cessation of muir burning and the subsequent increase in ground cover.
E Few in 1884, but unable to increase without introductions, which were promptly eliminated (*e.g.* 120 brace shot 1907-08). Now a few pairs at N end, and behind Laig.
C Occasionally strayed from Rhum when a high population there. Last record 1936.

Ptarmigan *Lagopus mutus.* **R** Seen 1772, present on the "high hills" 1796. A pair was introduced 1888, and seven birds seen 1890. None seen 1932-56; single birds Ainshval and Sgurr nan Gillean 1957, and one seen 1959.
E Hen seen September 1963 after northerly gale.

Black Grouse *Lyrurus tetrix.* **E** Reported to occur 1879; last bird shot 1904.

Partridge *Perdix perdix.* **R** Fair numbers in 1880s after introductions, but kept to coast; no later records.
E Introduced c. 1881; not plentiful 1884 and died out after 1888. 20 prs reintroduced 1928 reared 25 young; last record, one pair 1931.
[**C** Probably introduced in late 19th century, but no definite record.]

Quail *Coturnix coturnix.* **R** One heard and seen June 1959; another 1st June 1966.

Pheasant *Phasianus colchicus.* **R** Introduced 1888 and increased by 1889, but died out. Reared at Kinloch in 1920s. None now.
E Introduced 1896 but decreased. Large numbers brought in in 1933 and 1934. About 25 birds reported 1958; breeding regularly.
M Reared 1922 but extinct by 1930. Two records since 1940, during shoots on Eigg.
C Introduced before 1914 but did not survive.

Water Rail *Rallus aquaticus.* **R** One at Kinloch winter 1965/66.
E Three pairs bred 1879, one pair 1952.
C Total of 4 in winter since 1892.

Corncrake *Crex crex.* **R** Nested 1910 and 6 calling birds 1934 at Kinloch. Since 1950 1-4 prs have bred each year, but none 1960. Arrive in first week of May; latest bird 20th October at Kinloch.
E Noted 1796 and common in 1880s. No estimates thereafter until 1957 when 5 prs in single hayfield. Few calling 1963, 1966, but 19 in 1964.
M Numerous 1934. In recent years 8 prs have nested regularly, but only 2 prs present 1963.
C 12-15 prs 1933, chiefly at Coroghan, A'Chill, Tarbert and on Sanday. Only 5 calling birds 1956, 1961, but slight increase 1966.

Moorhen *Gallinula chloropus.* **R** One Kilmory August 1959; one Kinloch April 1964.
E 1-2 prs Laig 1888; one pair bred 1933 and 1958, probably at Laig.
M Bred c. 1940 and 1965; only two other sightings.
C Single birds November 1891, December 1933, August 1962 (the last on Sanday lochan).

Coot *Fulica atra.* **C** One January 1954 in the harbour.

Oystercatcher *Haematopus ostralegus.* **R** Several pairs 1910; common round the coast 1934 and thereafter.
E Several nests 1888; 40+ prs round coast April 1962.
M Few pairs 1934. Decreased 1940s, but 50+ prs 1963.
C Seen 1887, common by 1930s. 30+ prs round coast 1963.

Lapwing *Vanellus vanellus.* **R** Seen 1772 and bred 1796; 8-12 prs at Kilmory 1934. Since then has nested only at Harris, from 1959, usually 2-3 prs. Small flocks seen autumn and spring.
E Not numerous 1796 and few pairs 1880s. About 14 prs 1931, and 35 in 1933. After 1947 winter only one pair, increasing thereafter; by 1959 autumn flocks of up to 20 birds. Reduced to 3 prs 1962.
M Nested 1913 and 10-12 prs 1934. None after 1947 winter, but re-established since; 7 juveniles seen 1963.
C 3-5 prs bred Sanday in 1930s. No proven breeding thereafter until 1963; 2 prs 1964.

Ringed Plover *Charadrius hiaticula.* **R** 2+ prs bred 1934. Since 1957 up to 5 prs have nested at Kilmory, also one pair at Shamhnan Insir 1961 and 1965. Autumn passage noted in August; some birds winter.
E 2-3 breeding pairs most years since first recorded 1882; but none 1930-31. Nest by Kildonan and Laig bays, where some passage birds also noted in autumn.
M One pair 1934 and c. 12 prs regularly until 1947 winter. Thereafter only one seen in 10 years, but 4+ prs again by 1963. Some winter.
C Pairs Garrisdale and Sanday 1933, Sanday and Tarbert Bay (3 prs) 1936. In last 10 years, up to 3 prs at Conageraidh, NW Canna, and one pair Sanday in 1964. Also a few passage birds in August.

Grey Plover *Charadrius squatarola.* **R** One at Kinloch January 1961.

Golden Plover *Charadrius apricarius.* **R** Breeds in small numbers on Mullach Mor and Orval—Bloodstone Hill. Birds gather on the hills in July and move to Harris in September; here they winter in flocks of 50-100. A nestling ringed 29th June 1958 was found on Tiree (40m SSW) on 9th December 1959.
E Bred sparingly on hills in 1880s, and seen 1926, but not thereafter until 1964, when one pair bred. Winter visitor, August to April.
M A very few winter regularly.
C Bred until 1902; thereafter winter visitor only, except one on moors near Compass Hill, June 1963.

Turnstone *Arenaria interpres.* **R** One September 1963; 10 on 13th May 1965.
E Seen on four dates in autumn 1939-63.
M 30-50 regularly November to April; also 15 in July 1963.
C Four May 1934; occasional in winter 1935-44.

Snipe *Gallinago gallinago.* **R** Breeds sparingly in widely scattered localities. Noted in small numbers 1796; common on low-lying damp ground in 1950s. In August 1959, 20+ were disturbed from bracken at Kilmory.
E A few 1796 and 1880s. Bred chiefly near Kildonan 1926 to early 1950s; fewer than usual drumming after the hard winter 1963. A late nest with eggs Glen Charadail 13th August 1958. Also winter visitor in varying numbers; up to 80 have been shot in one year.
M A very few bred 1934 and 1963; some also arrive to winter.
C Breeds chiefly on the moors both E and W of Tarbert, but a few also on Sanday. Late nests with eggs July 1936 (several), July 1956 and August 1962; these may have been merely replacement clutches rather than second broods.

Great Snipe *Gallinago media.* **E** One shot between 1903 and 1913.

Jack Snipe *Limnocryptes minimus.* Occasional winter visitor to Rhum, Eigg and Canna (especially Sanday).
R Arrives late September or early October.

Woodcock *Scolopax rusticola.* **R** Bred 1933 and 1934 in all plantations; many pairs in 1950s; several pairs breed regularly now. Also winter visitor in varying numbers; many in winter 1962/63.
E Breeding proved 1957 and 1960, but none roding since 1962. Also winter visitor; many in hard winters of 1880s and 1890s.
M Winter visitor, especially numerous 1962/63.
C Arrives November; many wintered 1938/39.

Curlew *Numenius arquata.* **R** Seen 1772. Probably bred 1960, and at least 2 prs present S side of L. Scresort 1961. Up to 50 winter at Harris.
E Present 1796. Some birds present throughout the year in recent years, but fewest in summer; flocks up to 35 in autumn.
M A few summer occasionally; up to 12 arrive in autumn to winter.
C Usually absent April-July. Flocks up to 25 in August and later.

Whimbrel *Numenius phaeopus.* **R** Three 2nd March 1966; two late April to June 1961, 1966; 4 in September 1961.
E Seen in spring 1880s; one July 1962.
C Singles June 1953, 1962; seven 7th August 1964.

Black-tailed Godwit *Limosa limosa.* **R** Six at Kilmory, early May 1958.

Bar-tailed Godwit *Limosa lapponica.* **R** One at Kilmory, April 1958.
E One at Laig August 1958; one near Pier spring 1959.
M Two autumn 1938, one autumn 1966.
C One shot late autumn 1908.

Common Sandpiper *Tringa hypoleucos.* **R** Breeds on coast and inland. Very few inland 1934, but now breeds beside Kinloch, Kilmory and Harris burns, at Papadil, and beside some of the hill lochs. Up to 5 prs breed on the shores of L. Scresort. Birds arrive in last 10 days of April.
E Nests round the shores; also occasionally by the streams and L. Beinn Tighe. 21 prs in 1964.
M Several pairs breed regularly. Noted 1934.
C "Quite a number" 1933, but only 2 prs 1936. Four prs 1961 and 1963, S coast between the harbour and Tarbert, and at Conageraidh.

Redshank *Tringa totanus.* **R** One non-breeder June 1934. In recent years up to 15 mid August to late March; rare April-July.
E Seen in summer in 1880s, but no evidence of breeding. Occasional visitor up to 1933; thereafter none until 1958. In last 10 years seen on passage August and September, and in late April 1962.
M Regular winter visitor, up to 20.
C A few occasionally in summer; reported also as winter visitor. Passage birds August 1962, and 12 on 3rd August 1964 in harbour.

Greenshank *Tringa nebularia.* **R** Regularly seen July to early September 1957-61; winter records November to January 1959-61 at Kilmory. Noted on spring passage 1961.
E Recorded late July to early August 1939, 1957, 1960.
C Seen April 1937 and singles between late June and August in 5 years.

Knot *Calidris canutus.* **R** One August 1958.
E Up to 5 in August in 3 years since 1959.
M One November 1962, 1965; two October 1966.
C One early September 1937.

Purple Sandpiper *Calidris maritima.* **R** Eight October 1959; one mid January 1966.
E Two late June 1964.
M Occasional in winter with Turnstones.
C Occasional in winter; one killed by striking window, December 1929.

Little Stint *Calidris minuta.* **R** At Kilmory two 28th August 1957, seven 19th August 1961.

Dunlin *Calidris alpina.* **R** Regularly noted since 1957 on passage, mid August and early September; flocks up to 30. Also 6 at Shamhnan Insir 16th May 1964.
E Recorded infrequently on passage, chiefly in August. None noted between 1880s and 1958.
M Seen spring and autumn every year; also one mid July 1963.
C Formerly a regular winter visitor. One June 1953; one throughout August 1962.

Sanderling *Crocethia alba.* **R** Three at Kilmory August 1957, 12 at Shamhnan Insir August 1964.
E Singles at Laig July 1955, August 1958.
M Occasional in autumn; one wintered 1962/63.
C Occasional in autumn, July-September.

Great Skua *Catharacta skua.* **R** Single birds off Bloodstone Hill August 1959 and L. Scresort June 1961 and 1964.

Arctic Skua *Stercorarius parasiticus.* **R** Seen, perhaps breeding, by Pennant July 1772. Occasional offshore August and September; also singles June 1934, 1957.
E Occasional July-September, chasing terns off Castle Isle. One June 1963.
M Seen in autumns 1937-40, 1960.
C Occasional in autumn, chiefly August; sometimes chasing Puffins.

Pomarine Skua *Stercorarius pomarinus.* **R** Few in late summer 1881.
C One shot (? in November 1890).

Ivory Gull *Pagophila eburnea.* **C** One shot December 1922.

Great Black-backed Gull *Larus marinus.* **R** A few pairs breed at Kilmory, Harris, a'Bhrideanach and Rudha Port na Caranean. No marked population change since 1934.
E Reported to nest on hill lochs in 1880s. Up to 4 breeding pairs 1909, 1930. Now only 1-2 prs nest, at N end.
M One pair Eagamol 1934. Two pairs Muck and several Eagamol 1963, but slight decrease over past 20 years.
C About 10 prs bred in 1930s; increased by 1953; 17-18 prs 1961 and 1963.

Lesser Black-backed Gull *Larus fuscus.* **R** "Great numbers" on NE-facing slopes near Rudha Camas Pliasgaig in 1880s; a large colony persisted until recently, but none 1965. Scattered colonies elsewhere amongst Herring Gulls, and breeds amongst ruins at Port na Caranean, usually in good numbers, but few 1965, 40+ prs 1966.
E Reported common in 1880s, but only proven breeding records were 1913, 1933. Now a few pairs nest at N end.
M On Horse Island 12 nests 1934 and c. 20 prs 1963, but in other recent years up to 100 prs there. About 100 prs on Eagamol 1963.
C A few bred on W cliffs in 1933; 12 prs only, scattered in five Herring Gull colonies in 1963.

Herring Gull *Larus argentatus.* **R** Scattered colonies totalling thousands of pairs along W shores in 1880s and 1950s, but noted mainly on E coasts in 1934. Colony at S point of L. Scresort increased markedly in 1960 and held c. 50 nests in 1963.
E Nests Grulin and Castle Isle from earliest records onwards. From 1939 has also nested N end. 67 nests along shore between Pier and Cleadale, via N end, May 1962.
M Breeds Eagamol and a few pairs on Muck, chiefly near Camas Mor.
C Nests chiefly on N coast at Laum Sgor and Rudha Langanes, also at Garrisdale, Haslam and SE point of Sanday. Laum Sgor colony held c.

FIG. 8. Recoveries of Herring Gulls ringed as nestlings on Canna. Symbols as in fig. 7.

50 nests 1936 and 1960s; but total population increasing recently—225+ prs 1961, 290+ prs 1962, 335+ prs 1963. Recoveries of nestlings ringed 1961-65 are shown in fig. 8.

Common Gull *Larus canus*. **R** About 25 prs Welshman's Rock and Shamhnan Insir 1950; also bred elsewhere. Nested 1960 at S point L. Scresort, and c. 25 prs Harris 1965.
E Fluctuating numbers. "Very common" 1888, but only 20 prs S coast 1913. Bred Castle Isle 1926, Kildonan 1939; now chiefly N end and Castle Isle, with 29 nests N end 31st May 1962.
M One possible nest 1930. Small numbers breed round coast and on Horse Island.
C A few nested Sanday 1933, but no proven breeding again until 1962; 4 prs 1963. At foot of N cliffs c. 30 prs 1962, but one pair 1963.

Glaucous Gull *Larus hyperboreus.* **C** One shot in winter 1890s.

Little Gull *Larus minutus.* **R** One at Kinloch in March 1958.
C One shot August 1912.

Black-headed Gull *Larus ridibundus.* **R** Occasional visitor since 1950; chiefly summer, none in autumn; both adults and immatures.
E Occasional July and August, 1880s and recent years; some immatures, but small numbers only. Two in late April 1962.
M Occasional winter and spring.
C Few records, chiefly July; none 1938-58.

Kittiwake *Rissa tridactyla.* **R** In 1880s a small colony in the N; in 1934 two small colonies in NE and many colonies on SE cliffs. Now 3 colonies in NE: 30 nests Rudha Shamhnan Insir, 75 Rudha Camas Pliasgaig, 60 Creag na h'Iolaire (1959 counts). 1961 counts of SE colonies: 100 nests Welshman's Rock to Allt na Ba, 250 Sron na h'Iolaire, 550 Sgor Mor and 250 Rudha na Meirleach.
E Reported to have bred E side 1871 and N end 1891, but no proven breeding 1888 or this century, though pairs seen on S cliffs spring 1966. A 1913 record of "nesting on an islet off the S cliffs" probably refers to Muck.
M Cave colony in 1880s; also some then on Horse Island. Breeding on Eagamol only 1963.
C Large colony 1880s. 588 nests below N cliffs and 180+ on Sanday in 1936, and similar numbers 1953. In 1960s Canna colony held only c. 400 nests and Sanday (Easubric) 115-125.

Common Tern *Sterno hirundo.* **C.** Definite records June 1933, July 1936.

Arctic Tern *Sterna macrura.* **R** Pennant saw large numbers of terns at L. Coire nan Grunnd in 1772; elsewhere in the same chapter he notes that "Greater Terns" were seen on Rhum. From his textbook (1776) it is clear that these were either Common or Arctic Terns, not Sandwich. More recently 4 prs Arctic Terns bred at Shamhnan Insir in 1934, and 2 prs at Rudha Port na Caranean in 1955; the latter colony increased to more than 10 prs 1963, but only one pair 1965.
E Probably bred 1884 near the Pier. Five nests Castle Isle 1953; up to 12 prs since then. Flocks up to 50 sometimes near Castle Isle in August, probably from other islands.
M About 40 prs Gallanach 1934. In late 1930s Sgaogaig was covered with nests, but birds moved to Lamb Isle 1939. More recently returned to site near Sgaogaig, but decreasing; c. 10 young only 1963, and one pair (no nest) 1966.
C Birds present Haslam 1930s but no proven breeding. Nested in early 1950s in small numbers on islets in harbour, but none now. Up to 8 seen regularly in summer.

Sandwich Tern *Sterna sandvicensis.* **E** Four August 1962, one June 1963.
C Singles July and August 1955, 1961.

Razorbill *Alca torda.* **R** In 1960 a few colonies up to 25 prs in N, and a total of c. 200 prs along S cliffs.
E No proven breeding; a 1913 record must refer to Muck.
M Few bred Eagamol 1889, 1934. Now also on An Liachdach (3 to every Guillemot), but still chiefly on Eagamol (1 to every 10 Guillemots), where an increase noted 1966.
C No accurate counts of breeding numbers, as many under bluffs on N cliffs, Laum Sgor to Rudha Langanes. At Garrisdale 20+ prs and on Sanday (Easubric) 13 prs, both 1963.

Guillemot *Uria aalge.* **R** "Many" breeding 1910. A few colonies up to 25 prs in N and several up to 250 prs in S in early 1950s. Only 250+ prs along S cliffs 1960.

E No proven breeding; a 1913 record must refer to Muck.
M None reported 1889, but bred 1934. Decreasing recently.
C Breeds N cliffs, as Razorbill, but more open sites; no counts; c. 90 prs Sanday 1963.

Black Guillemot *Cepphus grylle.* **R** Noted 1880s, especially W coast Harris to a'Bhrideanach; seen 1934 chiefly on NE coast. Now generally distributed in small numbers.
E Bred below Grulin in 1880s; c. 12 prs 1909. In 1950s and 1960s slightly larger numbers recorded, particularly at N end and off S and SW coasts.
M Only 2 prs for many years, but 8+ prs 1963.
C "Common" near W end in 1880s; c. 10 prs 1933, but increase to 17+ prs 1961, mainly on NW coast (Conageraidh), at Coroghan, and on the low N cliffs of Sanday.

Puffin *Fratercula arctica.* **R** Was breeding 1796. In early 1950s mainly in three colonies on S cliffs, each 100-500 prs; by 1960 only at most 50 prs there. At Camas Pliasgaig a colony has remained at 50 prs.
E Bred in 1796 but not 1888. A 1913 record refers to Muck. By 1926 recolonization at Grulin; several hundred pairs nested until at least 1934, but none 1953 or thereafter.
M Seen on Eagamol 1889, 1934. Now breed chiefly on Horse Island; 170+ seen there July 1963. A few Eagamol and An Liachdach 1966 after 40 years absence.
C Five colonies 1892. Now mainly on N cliffs where c. 1000 counted offshore 1962. On Sanday chiefly on Dun Mor, where 200+ counted 1962, also a few N of lighthouse.

Stock Dove *Columba oenas.* **E** One (possibly 4) late April 1962.

Rock Dove *Columba livia.* **R** Was breeding 1796 and 1881 in caves along SW shore. None seen 1934, but a few in caves along S shore in 1950s. 12-15 prs may now breed. Large flocks seen sometimes in autumn, maximum 200+ November 1959.
E Seen 1796, and nested in four caves on S side 1888. Many nests in caves at N end 1939. Several flocks up to 25 seen each autumn in recent years.
M Breeds regularly; a few pairs Am Moel, Fionn-Ard and An Liachdach.
C Plentiful in some years, but few 1948 and 1956. In 1960s up to 8 seen daily along S coast, where it presumably breeds in caves. None on N cliffs or Sanday.

Woodpigeon *Columba palumbus.* **R** No firm records until 1955, when a few present Kinloch in summer; c. 12 nesting pairs by 1961, chiefly on N side of L. Scresort. Large flocks occasionally in autumn, such as 250+ in November 1959.
E One pair 1879 and a few pairs until 1891. Thereafter no proven breeding and few sightings until 1953. Now several pairs breed Galmisdale and Kildonan; increasing. Flocks up to 40 in autumn 1959.
M Since 1960 flocks of 30-40 in winter. No proven breeding, but a few present summer 1963.
C Occasionally seen in summer, but has not nested. Large influxes in some autumns, notably 1935 and the early 1960s.

Turtle Dove *Streptopelia turtur.* **R** Five birds in 4 years since 1948, all in May and June.
E Occasional in recent years, June and July.
M About 6 in 25 years, in autumn.
C Rarely recorded, chiefly in July and August.

Collared Dove *Streptopelia decaocto.* **R** Seen at Kinloch May 1960 and each year 1963-66 during May, June or July; up to 3 birds.
E Singles May 1959, 1961, August 1966.
M One May 1960; 4 prs March-July 1966, but no nesting.

Cuckoo *Cuculus canorus.* Fluctuating numbers on all islands; parasitizes chiefly Meadow Pipits, and often seen on the hills (even above 2000 ft on Rhum). Usually arrives in last week of April.

Yellow-billed Cuckoo *Coccyzus americanus.* **M** One October 1953.

Barn Owl *Tyto alba.* **R** One reported 1955; no breeding record.
E Nested among rocks in centre and W of island 1888, and in a sea cave 1891. Seen at Laig 1912-13 and early 1920s and at Kildonan 1939. Primary feather and pellets found near Kirk 1959.
C Four records between 1910 and 1962.

Snowy Owl *Nyctea scandiaca.* **E** One killed winter 1932/33.
C One November 1942.

Tawny Owl *Strix aluco.* **R** One suspected 1934; one reported 1955; one late June 1963. No breeding record.
E Rare visitor up to 1939; then none until 1964 when pair reared 3 young at Cleadale, and two other adults present.
C Last seen July 1937.

Long-eared Owl *Asio otus.* **R** Bred successfully 1934, and eggs laid May 1966, but clutch lost. Singles seen 1955, 1959.
E First proved to breed 1930; several pairs 1933. Now breeds regularly in several plantations.
M At least one, and up to 4, pairs nest in middle plantation. Another nest in rocks at Cairibh for several years, and in the Port plantation 1953.
C Single birds February 1923, November 1938 and in recent years at Tighard.

Short-eared Owl *Asio flammeus.* **R** Single birds May 1958, 1959, September 1961. A pair reared two young Kilmory Glen 1965.
E 1880s records rejected by Macphersons. 2 prs 1891 and nest in heather c. 1914. Nested 1953 and birds seen most years since.
C One December 1935.

Nightjar *Caprimulgus europaeus.* **R** One near Kinloch 10th June 1964.
E Included in 1880 list (and breeding Arisaig 1884). Heard 1933 and 1955.

Swift *Apus apus.* Occasional visitor to all four isles, chiefly June.
E Breeding suspected 1927 in cliffs.

Hoopoe *Upupa epops.* **E** One 23rd April 1954; another seen and heard May 1965, said to have been killed by a hawk.

Great Spotted Woodpecker *Dendrocopos major.* **R** A drilling at Papadil 1934; one Kinloch in August 1962.

Skylark *Alauda arvensis.* **R** Widespread but rather scarce breeder. Most numerous 1934 and 1959 on grassland top of Bloodstone Hill. Winter flock 30-50 at Kinloch, 1960 only.
E Small numbers nest in short heather. Flocks up to 50 seen on crofting areas in September.
M Numerous on pasture land.
C Fairly common Sanday and cultivated parts of Canna, but few on moorland. Does not winter usually, but hundreds during hard frost January 1940.

Shore Lark *Eremophila alpestris.* **E** One February 1959.

Swallow *Hirundo rustica.* **R** Reported to have bred regularly in farm buildings at Kinloch in 1940s but no longer does so. Often seen on passage, especially in May; earliest record 21st March 1966.
E First proved breeding 1913 at Laig. 1-2 prs only until 1953 when c. 12 prs. Recently at least 10 prs nesting at Kildonan and Cleadale.
M One pair nested for 3 years in 1950s and reared two broods 1966. Also regular spring and autumn migrant.

C One pair has bred in some years, most recently 1965.

House Martin *Delichon urbica.* Seen on passage over all four islands, both spring and autumn.
R Records in all months from April to November. Large numbers 16th September 1961. Began building but did not complete nest 1965.
C Many after SW gale September 1938.

Sand Martin *Riparia riparia.* **R** Four spring passage records, totalling 7 birds, since 1957; six at Kinloch 26th June 1965.
E 2-3 prs at mouth of Laig burn 1953, but breeding not proven.

Raven *Corvus corax.* **R** Seen 1772. Persecuted early 20th century and only two seen 1934. In recent years 4 or 5 breeding pairs.
E 2-3 prs 1879-88 at N and S ends; 1-2 prs 1926-53. At least 11 nest sites known 1954, though all may not have been used. Numerous 1955 when myxomatosis reached Eigg; decreased 1957, but at least 7 prs present April 1962.
M Two pairs until 1957; one pair 1963 on Horse Island. Now 2 prs again, Camas Mor and An Liachdach. Birds remain in winter.
C Two prs 1933 and thereafter. By 1961 at least 3 prs. Seldom winter; usually return March. Possible passage mid August 1962.

Carrion Crow *Corvus corone corone.* **R** Occasional in winter since 1957; six in December 1962.
M One found dead 1958 or 1959.
C A very few records in July, August and December.

Hooded Crow *Corvus corone cornix.* **R** Seen 1772. Nest contents and some adults destroyed until 1950s; only c. 6 seen 1934. Now breeds regularly, but numbers kept down by shooting; at least 9 prs nested 1958. Autumn flocks regularly number 100-150, but 200 September 1963.
E Common breeding bird 1880s. Probably persecuted until late 1930s; only c. 4 prs 1933, but common again 1939. Now numerous.
M Breeds freely; many winter.
C Seen 1887. Numbers kept down until 1940s; only 5 birds 1937. Increase to c. 100 birds June 1956. Nests chiefly on S cliffs and crags from Tarbert to Compass Hill.

Rook *Corvus frugilegus.* **R** Occasional in winter since 1957, usually single birds; no breeding record.
E Winter visitor before 1884. Few pairs nested 1885, increasing to 30 nests 1909, N of Laig. Nests removed and no further breeding records, though occasionally seen spring and early summer.
C Occasional up to 1930s; last record November 1938.

Jackdaw *Corvus monedula.* **R** Irregular in spring since 1957.
E First seen 1920; 6 prs bred 1933 and steady increase since. Probably up to 100 prs breeding in cliffs near Kildonan now. Flock c. 30 at Cleadale April 1962.
M Flocks 30-40 from Eigg visit Muck in winter.
C Present summer 1953 and 1961 but no proven breeding; driven off by Hooded Crows. Also rare winter visitor.

Chough *Pyrrhocorax pyrrhocorax.* **R** Not seen 1772, but Gray (1871) says "No longer breeds on Rhum," implying that it once did so.
E Single birds 1876, 1879. Last bred N cliffs 1886; possibly exterminated by Peregrines.
C Extinct before 1871, if it ever bred.

Great Tit *Parus major.* **R** Bred 1955. A few birds most autumns and many at Kinloch January and February 1965, 1966. The 1957 invasion reached Rhum in late October.
E First seen and bred 1939; breeding proved 1952 (probably several pairs) and 1957. Probably nests regularly now.

PLATE 44. Isle of Rhum from the air, showing (*left to right*) Glen Dibidil, the twin peaks of Askival (2659 ft) and Hallival (2365 ft), Loch Scresort with the woodlands and cultivation at Kinloch, and the low hills of Mullach Mor beyond Kinloch Glen. In the distance between Askival and Hallival lies Kilmory Glen. The higher slopes of the main mountain group hold a very large colony of Manx Shearwaters.

Photograph by J. K. St Joseph

PLATE 45. Isle of Eigg from the air, showing Laig Bay and the crofting areas of Cleadale and Tolain. The impressive inland cliffs afford nesting sites to several species of birds of prey.

Photograph by J. K. St Joseph

PLATE 46a. The Sgurr of Eigg, a pitchstone outcrop, looking across the woodlands of Galmisdale from Kildonan.

Photograph by W. U. Flower

PLATE 46b. The bay of Camas Mor, Isle of Muck, with the seabird cliffs of An Liachdach and Fionn-Ard, and the Ardnamurchan peninsula in the background.

Photograph by W. U. Flower

PLATE 47a. The islet of Sanday from Canna. In the background is Bloodstone Hill on Rhum. This view emphasises the flat and fertile land of Sanday and the extensive area of sand and mud exposed at low tide in Canna harbour. In the foreground lies the Square.

Photograph by P. R. Evans

PLATE 47b. The Isle of Canna from Sanday, showing Compass Hill, the pine plantation near Coroghan, and the harbour and pier.

Photograph by P. R. Evans

C Seen in 4 winters 1929-56.

Blue Tit *Parus caeruleus.* **R** Six to ten families 1934; numerous in 1950s. Up to 5 prs nested 1959-66, but none 1961-63; one nest 1964 at Papadil, all others at Kinloch. Influxes of birds October 1957 and November 1958.
E Recorded 1880-88; none thereafter until 1933, when bred. Several pairs nested 1957, especially at Kildonan. Some survived the 1962/63 hard winter.
M Occasional in spring.
C Seen in four years 1928-61.

Coal Tit *Parus ater.* **R** Bred 1950 but not again until 1965 (2-3 prs). Influxes in October most recent years, especially 1957, 1958.
E Seen 1888; 6+ prs bred 1934. Increasing in 1950s and now plentiful in conifer woods.
M Occasional in spring.
C Three in January 1946.

Long-tailed Tit *Aegithalos caudatus.* **R** Bred 1934. The source of a 1949 breeding record quoted by Baxter & Rintoul (1953) has not been traced. Occasional in winter; influxes October/November 1957, 1961.
E One record 1880s; three parties between 1949 and 1957. No proven breeding.
M One party autumn 1937 or 1938.
C Reported October 1935, March 1949.

Treecreeper *Certhia familiaris.* **R** Has nested regularly Kinloch since 1938; at least 3 prs 1961. Absent 1962 and 1963 breeding seasons; reappeared November 1963. Influxes autumn 1957, 1958. Single bird Papadil April 1966.
E Seen 1933, bred 1934. Families seen two woods 1957. Probably at least 2 prs have nested regularly in recent years; at least one survived the 1962/63 winter.
M One seen climbing a wall 1937.
C One autumn 1957 at the Square, one at Tighard 9th August 1964.

Wren *Troglodytes troglodytes.* **R** Breeds around L. Scresort, at Papadil and in rocky places on the hills. Common in the woods and in the heather; family party at over 2000 ft on Hallival 1957.
E Common since earliest records, but no broods seen 1963.
M Common until 1963, when rather few seen.
C Common 1887, scarce 1930s. Confined chiefly to the plantations and gulllies along the S coast. Recorded from only 4 sites 1962 and in one plantation 1963, but recolonised most areas by 1964.

Dipper *Cinclus cinclus.* **R** Seen in 1880s; a few pairs 1950, 1955; probably 3-4 prs now. Birds usually descend from the hills to winter at Kinloch, but some seen above 1000 ft November/December 1960.
E Seen in 1880s; at least one pair bred 1909, 1926, 1933. Two pairs Laig burn (Glen Charadail) 1957; one pair 1958 when pairs also bred on two other burns. Two seen 1963, after the hard winter.
C Rare in winter; last seen January 1956.

Mistle Thrush *Turdus viscivorus.* **R** First seen and nested 1934. Up to 3 prs have nested at Kinloch in recent years; one pair at Papadil 1962, 1963. Small flocks noted in autumn.
E First seen 1891; breeding suspected 1909, proved 1933; several pairs in the woods 1934. Increased in 1950s, but few breeding records as observations have been made too late in the year. Parties high on the screes and moors July 1962.

Fieldfare *Turdus pilaris.* Regular on autumn passage (main arrival late October) all four islands; small numbers winter.

Song Thrush *Turdus philomelos.* **R** Breeds in the woods at Kinloch and Papadil. Influx in November; return passage March and April.
E Breeds commonly in the woods at Galmisdale and Kildonan, and on bracken slopes. Seen at 750 ft on the Cleadale cliffs in August.
M A few pairs breed in the gardens and plantations and on heather slopes.
C Less than 15 prs breed, chiefly in the plantations round Canna House.

Redwing *Turdus musicus.* Regular passage migrant, mid October/early November and mid March/mid April; a few winter occasionally.

Ring Ouzel *Turdus torquatus.* **R** Seen July 1772. In 1934, 6-10 prs restricted to high corries. Since 1955, 3-4 prs have bred each year, usually above 1500 ft, though nested at 800 ft (Bloodstone Hill) 1957 and sea level (Papadil) more recently.
E Present 1850; in 1880s bred near the Sgurr, at Grulin and Laig. Males seen near the Sgurr 1891 and 1909, and pair believed to have bred 1931. No later records.
C None seen since 1931.

Blackbird *Turdus merula.* **R** Breeds only in the woods, where slightly more common than Song Thrush. Autumn influx late October or early November each year; many spent January in the woods in 1963 and 1966. Of the immigrant birds, a male and a female ringed early 1960 were recovered S Norway November, 1961 and 1962 respectively; also a male ringed November 1961 was caught and released on the Frisian Islands in March 1964; it was subsequently recaptured twice during winter 1964/65 at Kinloch, and finally recovered on 10th April 1965 in Denmark.
E Found up to 600 ft in bracken and bushes along the burns; also in the woods; slightly less common than Song Thrush. Passage noted each November; also suspected in late April 1962.
M Rarer than Song Thrush 1934; similar numbers and distribution 1963. Large numbers pass through in November.
C One pair 1933, 3 in 1940; probably c. 6 now, mainly in deciduous woods. Often large influxes in autumn.

Wheatear *Oenanthe oenanthe.* **R** Breeds in rather small numbers. Seen 1772; widespread 1934, 1950s and now. Earliest arrival 27th March 1963.
E Probably 100+ prs on island in summer. Noted on passage, especially August 1958 and late April 1962.
M Only a few 1934, but many breeding pairs 1963.
C Very common since records first kept; breeds mainly in the valleys descending from the upper plateau. Perhaps 100 prs.

Stonechat *Saxicola torquata.* **R** Bred 1910; only a few pairs 1934 and early 1950s. Four pairs 1958, nine 1959, falling to three 1962. After the hard winter at least one pair bred 1963, increasing thereafter to 8 prs 1966.
E Fluctuating numbers, but 2-3 prs most years; 4-5 prs 1931; eight families 1959; 4 prs 1964.
C Several pairs along S coast 1930s. After severe winter, only one male 1947; also one family 1958, but 6 prs 1961, 7 in 1962; after another severe winter only 2 prs 1963, 1964. Birds are present on Canna April-October.

Whinchat *Saxicola rubetra.* **R** 3-4 prs have bred most years, chiefly at Kinloch and Kilmory, but at least 5 prs 1958, 6 prs 1966.
E "Numerous" from 1880s onwards, though few in 1930s (only one pair 1931). Now several tens of pairs breed each year.
M A few seen 1934, 1955; at least 2 prs bred 1963.
C Seen 1887; in 1930s 1-2 prs on Canna; several pairs Sanday 1953. Only one pair 1961, 1962, but at least 8 in 1963 and 6+ in 1964.

Redstart *Phoenicurus phoenicurus.* **R** Bred 1961 and males seen in summer 1962, 1963, 1965, 1966.
E Single birds seen each year 1958-61; also 1964.

Robin *Erithacus rubecula.* **R** Restricted to Kinloch woods during summer, but also bred Papadil 1958. Occasional at Kilmory and Harris in autumn; an apparent influx November 1957.
E Very common since records first kept. Chiefly in Galmisdale woods, but a few at Cleadale April 1962.
M None 1934; bred 1963 in garden and the plantations.
C In summer found chiefly in deciduous plantations; in 1960s several pairs, more than the 1-2 prs recorded in 1930s.

Grasshopper Warbler *Locustella naevia.* **R** Heard regularly in two areas, Kinloch Glen, early June 1966.

Sedge Warbler *Acrocephalus schoenobaenus.* **R** First seen and bred 1958; bred again 1966. Singing birds May 1960-62 and 1964-65.
E 1-2 pairs 1888; no further proven breeding until 1955. Probably has bred most years recently; 2 prs 1963, 9 prs 1964.
M At least one pair 1955, but breeding not established.
C At least one pair bred 1953; other singing males present. Bred again 1961, and odd birds seen in recent years.

Blackcap *Sylvia atricapilla.* **R** Four occurrences November and one December since 1957; males singing late summer 1958, 1960.
E Female seen December 1958.

Whitethroat *Sylvia communis.* **R** One pair 1950 and at least one pair bred 1958 and thereafter; 2 prs 1959; also odd birds in several years.
E Fluctuating numbers; few 1880s, abundant 1891, 1913. Up to only 4 prs 1930s. Fairly common early 1950s; several tens of pairs late 1950s.
M One pair bred each year until 1961.
C 2-4 prs 1933, but only one pair late 1930s. Up to 6 prs 1956 and 6 families 1964; smaller numbers in other years.

Willow Warbler *Phylloscopus trochilus.* **R** Common, chiefly at Kinloch but also recorded at Papadil; 15+ singing birds round L. Scresort 1961, 6 nests found 1962. Usually arrives mid April; two May records from Kilmory, but no proven breeding.
E Numerous (several tens of pairs breeding) in all lists except 1930s and early 1950s. Chiefly in small valleys, especially those with cover of hazel. Juvenile ringed Cleadale 29th July 1962 recovered Bilbao, Spain, 6th September 1963.
M One singing bird 1934: breeding first proved 1958 or 1959; several singing birds 1960. Pair bred Port plantation 1963.
C Up to 6 prs in 1930s, chiefly near Canna House and Coroghan; fewer pairs recorded early 1960s, but singing may have stopped before counts made.

Chiffchaff *Phylloscopus collybita.* **R** First seen April 1958, when 6 singing birds on 25th; pair bred 1959. Up to 3 singing birds most springs recently, the earliest on 16th March.
E Singing birds June 1960, September 1963.
C Singing bird July 1963.

Wood Warbler *Phylloscopus sibilatrix.* **R** One singing 1934 and nesting proved 1961, 1962; probably at least one pair has nested annually since. Earliest arrival 21st April 1963.
E Heard several times May 1955.

Goldcrest *Regulus regulus.* **R** Breeds regularly in good numbers; influx noted October 1957.
E Nested 1880s and numerous 1926, 1933, 1934; however, none 1930, 1931, 1939. A steady increase through 1950s, especially in conifer woods. Sev-

eral pairs bred 1963, after the hard winter.
M Regular spring migrant; no breeding record.
C Single birds 1930, 1943; first bred 1956 and probably annually thereafter until 1961. None 1962, 1963; one family August 1964.

Spotted Flycatcher *Muscicapa striata.* **R** Two pairs, possibly more, have bred Kinloch most years; one pair nested at Papadil 1959, 1962.
E Seen at Laig and by woodlands 1879-91; thereafter very few records and no proven breeding until 1957, when 2+ prs nested on seaward edge of Manse wood. Since then a few pairs have nested regularly.
M One 18th May 1960.
C First seen 1936; two 1937. Breeding first proved 1961, 2 prs 1962, none 1963, one 1964.

Pied Flycatcher *Muscicapa hypoleuca.* **R** One Kinloch and 3 Kilmory Glen mid September 1963, after heavy arrivals in E Britain.
E Singles early September 1956 and 1958, also after arrivals in E Britain.

Dunnock *Prunella modularis.* **R** Six or more pairs nest regularly Kinloch. Occasional single birds Kilmory and Harris, October and November; an apparent increase in population in winter, October-March.
E Widespread, not numerous, and no estimates of population size as very secretive in summer and autumn when most observations made. Survived at least in the woodlands in 1963.
M A few breed every year (though none seen July 1963). An apparent increase in autumn.
C Seen 1887, and up to 4 in 1930s and early 1950s. At least 10 prs in woodland near Canna House, and a few pairs in scrub below S crags alongside the Tarbert road in 1961. Seen 1963 after the hard winter.

Meadow Pipit *Anthus pratensis.* **R** Seen 1772. Now a rather scarce but widespread breeding bird, up to 1000 ft. Autumn passage August-September, but some birds linger till mid November. Return passage late March and April.
E Common, especially on moorland. Autumn passage noted August 1958 and 1962, and spring passage late April 1962. One ringed 24th April 1962 was recovered 25th December 1962 at Gaja, Portugal.
M Common breeding bird, but not on Horse Island.
C Thinly distributed in summer on the moorland and coastal pastures. A few tens of pairs August 1964.

Tree Pipit *Anthus trivialis.* **R** Occurs on passage; singing birds June 1958 and at least 3 at Kinloch, May and June 1961. No breeding record.
C One 4th August 1964.

Rock Pipit *Anthus spinoletta.* **R** Several tens of pairs nest along the shore. Birds also seen up to 1500 ft and 1½ miles inland occasionally, but no proven inland nesting.
E Breeds commonly along the shore; at least 50 birds August 1958.
M Seen 1913; a few tens of pairs 1963.
C "Increase" reported 1936; up to 50 prs probably present along the shore most years now.

Pied Wagtail *Motacilla alba.* **R** "White" wagtail seen by Pennant, July 1772. None seen 1934, but since 1950s pairs have nested Kinloch, Kilmory and Harris (maximum 4 prs 1959). Birds present early March to late September. White Wagtails *M. a. alba* noted regularly on passage April and October recent years, and a pair reared young 1960.
E Scarce 1880s, but several families 1926, when a roost of 40+ at Laig. In 1930s 2-4 prs nested; more recently up to 5 family parties seen (in 1959). Passage noted August 1958; one ringed 18th August recovered on Atlantic coast of France at St Nicolas-de-Redon on 25th December 1961. Passage of White Wagtails noted September 1959, May 1962.
M Several pairs nest but do not winter.

C Very few seen and no proven breeding 1930s. 1-2 prs 1956 and c. 4 family parties 1961, 1962; none 1963, but at least one pair bred 1964.

Grey Wagtail *Motacilla cinerea.* **R** Seen 1934, 1950; breeding proved 1957 at Kinloch and Papadil; at least one pair breeding regularly since then. Some birds winter at Kinloch.
E "Yellow" wagtail seen 1880s, probably this species. Single birds early 1930s; bred 1934 in Glen Charadail. At least 2 prs bred 1949-57, but probably only one recently.
C Used to be rare visitor in spring; none recently.

Yellow Wagtail *Motacilla flava.* **R** A male at Kinloch May 1963.

Waxwing *Bombycilla garrulus.* **R** Singles or small flocks October to December in 1950, 1957, 1959 and 1965.
E One c. 1950; small flocks early November 1965.
C Seen December 1946, 1958.

Great Grey Shrike *Lanius excubitor.* **M** Two November 1959; one November 1960.

Starling *Sturnus vulgaris.* **R** Scarce Kinloch 1934, but bred freely in a dovecote there in 1940s; none 1950s, but 3 prs 1962 and one pair 1964-66. At Kilmory c. 3 prs nest most years, but 4 prs 1965. At Harris 4 prs 1965, one pair 1966. Wintering flocks of up to 100 birds seen most years, especially 1962/63. One ringed late December was recovered in Finland in August; another two ringed January were found in mid May and late June in Finland and Norway respectively.
E Few nested 1880s, but several large flocks noted. Bred in good numbers from before 1909 onwards; present breeding population probably 50-100 prs.
M Numerous 1934; slight decrease recently. Breeds freely in stone dykes and holes; perhaps 50 prs. Flocks up to 200 seen in autumn.
C Numerous 1887 and 1930s, but not plentiful 1944 and decreasing until late 1950s. Now several tens of pairs nest on houses and in cliff crevices. A roost which held 300+ birds in July 1936 no longer exists.

Greenfinch *Chloris chloris.* **R** First record 1957; bred 1960, 1963 and possibly 1962; pair at Kinloch May 1966. A few winter most years.
E First seen and bred 1926; steady increase since and now nests in all plantations. Small flocks have been seen Cleadale, but no nests.
M First proved to breed 1937, and breeding most years thereafter. Birds present in all plantations 1963.
C First summer record 1933; odd birds thereafter until 1961 when a flock arrived January and c. 6 prs bred. Also bred 1962-64.

Goldfinch *Carduelis carduelis.* **C** Singles October 1927, May 1934.

Siskin *Carduelis spinus.* **R** Occasional in winter; sometimes large numbers, 100+ in late October 1959. At least one pair bred Kinloch 1964 and 1966, and pair present May and June 1965.
E Female seen late April 1962.

Linnet *Carduelis cannabina.* **E** 2-3 seen 1887 and pair 1939; also seen 1964, but no proven breeding yet.
C Male seen June 1963; pair with juvenile August 1964.

Twite *Carduelis flavirostris.* **R** Widespread in summer, but not numerous. Breeds regularly at Harris, and flocks gather at Kinloch in October, but never more than 50. Influxes noted Harris and Kilmory in April.
E Fluctuating numbers. Common most years except 1926, and 1931 when none seen, though numerous 1930. Evidence of passage in August (flock 150+ on 18th August 1958), but some remain on cultivated land, as at Cleadale, until much later. Several tens of pairs breed.
M Breeds regularly, but a decrease in 1963.

C Noted 1887 and plentiful 1930s, when nests with fresh clutches in July. Only a few pairs 1950s but more common 1961, especially on the edges of grazed or cultivated land and the plantations. Flocks up to 50 seen several times August 1962.

Redpoll *Carduelis flammea.* **R** Quite a number seen at Kinloch 1934, and bred there 1962, 1965, 1966, and at Papadil 1963. None seen 1950, 1955, 1960-61, but flocks of 30+ at Kinloch in September 1957 and July-September 1958.
E Seen 1888 and possibly heard 1949.
C Recorded in 4 years 1936-59; pair bred 1940.

Bullfinch *Pyrrhula pyrrhula.* **R** Said to have been seen in early 1940s; 3 in November 1961. In 1964 at Kinloch, female January, male April and pair June.
E Reported 1880, though Macphersons disbelieved record. Small party arrived 1932; one pair Galmisdale 1957, at least 3 prs 1958. Now breeds regularly.
C A very few spring records, but none for at least 15 years.

Crossbill *Loxia curvirostra.* **R** Invasions late June and early July 1958, 1959, 1962; two January/February 1963; small flocks up to 20 in August and early September 1963.
E Flock 60+ July 1888; four January 1963.
C Small flocks June-August 1910, 1927, 1953, 1958.

Chaffinch *Fringilla coelebs.* **R** Very common breeding species in Kinloch woods; also at Papadil. Flocks of several hundred gather at Kinloch August to early April; birds ringed there have been recovered on Eigg in April, and breeding on Soay (Skye) in May.
E Breeding and not uncommon 1880s; steady increase since, though scarce in 1930. Now very common in all deciduous woods, and a few have bred Laig and Cleadale since 1939.
M None 1923; a few pairs 1933. Now breeds regularly in small numbers in gardens and plantations.
C 2-3 prs near Canna House 1930s. Increased steadily to c. 10 prs 1950s. Now several tens of pairs at Coroghan and in the woods above Canna House.

Brambling *Fringilla montifringilla.* **R** Up to 5 at Kinloch in some winters since 1959.
E Male seen 26th December 1963 had been ringed on Rhum a week before.

Yellowhammer *Emberiza citrinella.* **R** Occasional spring visitor, first seen April 1958.
E Common 1880s and possible increase 1930s; now several tens of pairs breed. Up to 10 birds together at Cleadale April 1962.
C Decreased before 1930s; at least one pair bred 1936 and 1939, but then no records until 1962 when 2 seen June and August. None since.

Corn Bunting *Emberiza calandra.* **R** Four records since 1958, maximum 5 birds; three records March-May, one December.
E Abundant 1884-1909 but few by 1913; thereafter singles 1930, 1954.
M Few pairs until 1930s; none after 1937 except one March 1963.
C Common 1880s but only 1-2 prs by 1930s. Last recorded April 1949.

Little Bunting *Emberiza pusilla.* **R** One seen two dates October 1957, possibly two different birds.

Reed Bunting *Emberiza schoeniclus.* **R** One or two birds have been seen most years, mainly January-February and June. No breeding record.
E Bred in two localities 1880s; one pair N of Cleadale 1934. Then no records until 1957 when one pair bred Laig. Now breeds regularly with at least 2 prs 1962.

M One pair 1938, odd records thereafter; bred 1958 and 2-3 prs 1963.
C Winter records 1933, 1935. Then none until pair bred and another present in 1962; one pair 1963.

Snow Bunting *Plectrophenax nivalis.* Winter visitor, recorded from all four islands.
R Regular mid September to mid April; numbers up to 50 (January 1959).
E Regular in small numbers; first record 1926.
M Occasional; very few.
C 20+ in November 1935.

House Sparrow *Passer domesticus.* **R** Bred in pine trees Kinloch 1934. None seen early 1950s but wintered 1957/58 and 7 prs nested 1958. Increase to at least two dozen pairs since 1964.
E First nested Kiel cliffs 1885; by 1888 also nesting Laig farm and steady increase thereafter until 1930s when fairly numerous. Now nest chiefly at Cleadale and on houses at Kildonan and Galmisdale, probably several tens of pairs; flocks up to 50 at Cleadale in August 1960 and 1962.
M "Plague" proportions in early 1930s. Then killed, and decreased, but big increase again 1963.
C None c. 1900, common by 1930s. Decreased markedly in 1940s and restricted to Coroghan. Common again 1953, and many tens of pairs breed now; flocks up to 70 seen in August 1962 and 1964.

Tree Sparrow *Passer montanus.* **R** Injured bird February 1962 and flock of 20 in May that year; 6 at Harris June 1965.
E 6-8 prs nested in ruins at Kildonan 1884-91, but no records thereafter until 1950, when several seen November. Two at Kildonan 1964.
C Less than 3 prs Coroghan 1933; none thereafter until 1961. At least one pair bred Coroghan 1962; breeding suspected in old graveyard 1963; several birds present August 1964.

Acknowledgments

We are most grateful to A. T. Macmillan and Dr W. J. Eggeling for advice on the presentation of this paper. An earlier draft of the manuscript was read by Dr J. L. Campbell, Dr W. J. Eggeling, V. P. W. Lowe, Dr H. I. C. Maclean, Mrs E. McEwen and P. Wormell; we thank them for correcting tactfully our wilder statements and for supplying much additional information. A. W. Diamond kindly supplied the recovery details of seabirds ringed on Canna in 1965. Any inaccuracies which remain in the text are the sole responsibility of the authors; we hope there are very few.

Summary

The Small Isles—Rhum, Eigg, Muck and Canna—and their habitats, are described in relation to the breeding birds and mammals. Information on the birds of each island and changes in their status is given in a detailed systematic list, to which is added an extensive list of references to published material and an appendix giving details of ornithological visits to the islands.

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Appendix

Dates of observations from which the systematic list was compiled

RHUM

1881—summer, J. A. Harvie-Brown.
1886—August, J. A. Harvie-Brown.
1889—June, J. A. Harvie-Brown.
1910—summer, Miss E. V. Baxter, Miss L. J. Rintoul.
1934—19th-26th June (not 1933 as stated in *Scot. Nat.* 1939: 22), A. G. S. Bryson, J. H. B. Munro, G. Waterston.
1948—late July, Seton Gordon.
1950—19th-22nd June, W. R. P. Bourne.
1955—25th-30th July, W. R. P. Bourne.
1956—26th-31st May, T. C. Arbuthnott, W. J. Eggeling, A. B. Duncan, E. M. Nicholson.
1957-65—V. P. W. Lowe.
1957—July, C. Booth, C. Hodgkinson.
1958—16th June-3rd July, J. B. Nelson.
1958—3rd-15th August, N. G. Campbell.
1959—3rd-15th August, P. R. E. and Ampleforth College party.
1961—15th-20th May, P. A. Banks, B. Campbell, K. Williamson.
1963—15th-22nd June, A. W. Mitton, J. MacCafferty.
1963—9th-18th September, P. F. Cornelius, C. J. Evans, D. A. Palmer.

EIGG

1875-79—frequent visits, A. F. Joass.
1877—August, R. Gray.
1870s and early 1880s—G. Scott, manager of the island.
1879—late April, A. C. Stark.
1879—late May/early June, J. J. Dalgleish.
1880s—A. H. Macpherson, owner of Eigg.
1881-88—short summer visits, Rev. H. A. Macpherson.
1882—18th-26th May, Rev. H. A. Macpherson.
1884—19th-24th June, W. Evans.
1887—17th-23rd June, J. A. Harvie-Brown.

1888—July, Rev. H. A. Macpherson.
1891—late June, J. A. Harvie-Brown.
1891—Harold Raeburn.
1909—31st May-4th June, G. G. Blackwood.
1910—May, Rev. J. M. McWilliam, O. H. Wild.
1913—20th-24th June, J. Kirke Nash, D. Hamilton.
1926—July, C. G. Connell.
1927—summer, A. B. Duncan.
1930—2nd-12th June, A. G. S. Bryson.
1931—15th-18th June, G. Waterston, G. L. Sandeman.
1933—June, G. Waterston.
1933—13th June, Miss D. Steinthal.
1934—June, G. Waterston, A. G. S. Bryson, J. H. B. Munro.
1939—7th-21st July, W. Craw.
1949—July, J. D. Lockie.
1952—11th-20th August, Mary Henderson.
1953—7th-17th July, R. Napier, W. Law.
1955—23rd-30th July, W.U.F.
1957—22nd July-1st August, W.U.F.
1958—11th-21st August, P.R.E. and Ampleforth College party.
1959—1st-31st August, Mrs E. Hamilton.
1959—19th-26th September, W.U.F.
1960—1st-25th August, K. D. Briand.
1962—April, R. R. Lovegrove, E. Byrne.
1962—26th May-2nd June, W. Wyper.
1962—July, R. R. Lovegrove.
1962—1st-21st August, K. D. Briand.
1963—20th-25th July, W.U.F.
1963—31st August-7th September, J. Watson.
1963—17th September, P. F. Cornelius, D. A. Palmer, C. J. Evans.
1964—29th June-4th July, J. L. S. Cobb.

MUCK

1889—June, J. A. Harvie-Brown.
1913—23rd June, J. Kirke Nash, D. Hamilton.
1930—8th August (Horse Island only), G. Waterston, A. G. S. Bryson.
1934—15th-17th June, J. H. B. Munro, A. G. S. Bryson.
1955—24th July, W.U.F.
1960—18th May, K. Williamson, B. Campbell, P. A. Banks.
1963—15th-20th July, W.U.F.

CANNA

1881—June, J. A. Harvie-Brown.
1887—June, J. A. Harvie-Brown.
1902—26th June, W. H. Workman.
1920s—several visits, J. Kirke Nash.
1920s and early 1930s—notes kept by A. C. Thom, then owner of Canna.
1933—12th June, Miss D. Steinthal.
1933—16th-20th June, G. Waterston, A. G. S. Bryson.
1936—July, R. Carrick.
1937—June and July, J. D. Robertson.
1948—20th August-10th September, Merchant Taylors' School, Crosby, and Monkton Combe School, Bath; joint expedition.
1953—13th-24th June, H. A. Course.
1954—early July, R. Napier, W. Law.
1956—23rd-30th June, H. A. Course.
1956—4th-11th July, Miss D. Bradley.

1958—31st July, A. N. Sykes.
1961—17th-29th July, P.R.E., B. R. Slattery, Miss P. Harrison.
1961—14th-27th August, Repton School party.
1962—2nd-4th June, W. Wyper.
1962—31st July-15th August, P.R.E. and Ampleforth College party.
1962—8th-18th August, Miss E. Kiddie, Miss E. Cubitt.
1962—13th-25th August, Repton School party.
1963—17th-29th June, P.R.E., B. R. Slattery, P. Woods, Mrs P. Woods.
1964—30th July-10th August, K. Williamson.

Short Notes

American Wigeon in Shetland

Shortly after my return from leave on Fair Isle, in the middle of October 1966, I heard that a duck with an American ring had been shot during my absence. For the next few weeks I attempted to get information on the bird, but it was the middle of December before I was able to contact the fisherman concerned and obtain the ring and relevant information.

On 7th October 1966 George Leslie of Virkie was hunting duck and encountered a flock of five on the Loch of Mails, two miles north of Sumburgh airport. He shot one, which he later found to have an American Fish and Wildlife Service ring 665-58773. When I saw him he said it was a normal Wigeon, but I discovered that it was somewhat smaller and lighter than others he had obtained on previous occasions. I did not see the bird at any time, but it was claimed to be good eating although rather small.

Later I learned through the Ringing Office that the bird was an American Wigeon *Anas americana* and had been ringed as a female chick near Sheffield, Grand Lake, New Brunswick, Canada, on 6th August 1966, just two months before it was shot. I calculated that the distance between the ringing and recovery points was 2760 miles NE.

I understand that this is the first satisfactory record for Shetland. It is of particular interest since there can be no doubt that this was a genuine wild bird, whereas there is frequently the suspicion with records of rare ducks that the birds have in fact escaped from collections. On published information this is only the third recovery of an American-ringed duck in Britain. The other two were Pintail.

M. Carins.

(For details of another Scottish record see Current Notes. —Ed.)

Surf Scoter in Fife

In late autumn and winter there are big flocks of Common and Velvet Scoters off the east shore of Tentsmuir. On 2nd October 1966 my wife and I were using a 60x telescope to examine a flock of about 300, moving out on the ebbing tide, with a few Scaup and Slavonian Grebes and single Red-throated Diver, Great Crested Grebe and Guillemot, when we came on a drake Surf Scoter. It was a large black duck and at ½ mile range clearly showed a bold pear-shaped patch of white on the back of the head, tapering almost to a point towards the base of the nape. When it faced us the bird showed a smaller narrow patch of white above the bill, which at that range looked pale orange and similar in size to the other scoters' bills.

R. Job.

(Surf Scoters were seen in the same area in 1928 and 1955 (*Scot. Birds* 2: 135). In the past five years there has been an increase in the number of Scottish records, with reports from the Solway and Moray firths, the Outer Hebrides, and Orkney (*Scot. Birds* 2: 306; 3: 195, 252, 362; 4: 294).—Ed.)

King Eider in Shetland

On 6th September 1966 G. D. Joy found a King Eider in a flock of about 1000 common Eider off Sumburgh Head. I had examined a raft of 700-800 Eiders there two days before but failed to find it. On the 7th with James Irvine I scanned these birds for 45 minutes before finding the King Eider. Being a drake in full eclipse it was most inconspicuous.

The birds were diving and feeding and being harried slightly by a small party of Herring Gulls. One Eider was seen with a crab in its bill. After feeding, the King Eider preened and flapped its wings, showing the colour of the feet and the wing and underwing markings. We watched for about two hours and made the following description:

> Slightly smaller than Eider; similar shape, but forehead steep and tail shorter and more pointed. Colour mostly brown like female Eider, looking much darker when sun went behind a cloud; back and tail darker brown; breast creamy brown; scapulars white, but area smaller than Eider's; underwing dirty white; no sails visible in wings, nor white patch near legs; head brown, with pale line at edge of hood, extending down and back from eye; pale creamy ring round eye; bill dull pinkish orange, with white tip to upper mandible, the colour being more obvious when bird looked to one quarter; legs dull orange-yellow.

We had both previously seen a drake King Eider in full plumage and another in the final stages of eclipse plumage (*Scot. Birds* 3: 311; 4: 295) and were able to confirm G. D.

Joy's identification. On 9th September the big raft of birds was still there and I showed the bird to John H. Simpson of Whalsay, who also identified it although he had no previous experience of the species.

DENNIS COUTTS.

Buzzards breeding in Orkney

Until well into the 1950s the Buzzard was a very uncommon visitor to Orkney. Buckley and Harvie-Brown in *A Vertebrate Fauna of the Orkney Islands* (1891) only give four occurrences, to which James Omond in *How to Know the Orkney Birds* (1925) has nothing to add. On the other hand the Rough-legged Buzzard has for long been known as a regular passage migrant and sometimes a winter visitor.

I saw my first Buzzard in Orkney in 1954, and in the next few years odd birds were turning up with increasing frequency. Ever since 1961, when a pair were seen together in spring, there have been speculations on the probability of their breeding. Then in 1962 and again in 1964 two different people in each case saw a pair of Buzzards in late summer accompanied by what were apparently flying young. During the intervening summer of 1963 I spent a good deal of time searching, but though the pair was occasionally seen there was no proof or evidence of successful nesting. In April 1965 I thought the problem was going to be solved when I saw a pair building their eyrie on an inland cliff, but three weeks later the nest seemed to have been abandoned.

It was on 27th April 1966, while exploring a Peregrine cliff, that I came across, by mere chance, a Buzzard incubating three eggs. Two young were subsequently reared. They were fed on leverets and rabbits and on one occasion there was a pigmy shrew in the nest. There is strong evidence that a second pair attempted to breed. I saw the pair on 28th April, but they had not yet started building. However on 25th June there was a substantial nest at the 1965 eyrie, which showed every sign of fairly recent occupation but was empty. This pair had evidently failed again.

E. BALFOUR.

Crane in Aberdeenshire

A common Crane was first seen at the farm of Drums, 3 miles north of Newburgh, on Saturday 15th October 1966, and many of the local ornithologists watched it next day. The weekend was characterised by quite thick mist and a southeasterly breeze, bringing a considerable landfall of Fieldfares, Blackbirds, Ring Ouzels, Redstarts, Goldcrests and other birds around Newburgh. The Crane was seen

again on the morning of the 17th and on the 23rd but not since.

We had good views of it both on the ground and in the air. In flight we noted the extended neck, relatively short bill, short rounded tail, and the feet extending far behind. The wings were distinctly splayed at the tips, which were much darker than the rest. On the ground the large size was unmistakeable, as were the long neck and legs and the drooping feathers over the tail. The head and neck markings were not well developed, though there was a suggestion of a light stripe extending through the eye to the back of the head. The upper neck was not distinctly darker than the rest and I concluded that this was an immature bird.

GEORGE M. DUNNET.

Gull-billed Tern in West Lothian

While watching a procession of terns moving west up the Forth at Dalmeny two hours before the afternoon high tide on 3rd September 1966 I had the good luck to see a Gull-billed Tern among the several hundred Common and Sandwich Terns. I was using 9x35 binoculars, and the bird was about 50 yards away, flying between two Sandwich Terns.

My attention was first caught by the shorter, relatively thicker and apparently all-black bill of the middle bird, together with its compact and short-tailed appearance between the others. Realising I would have only a moment to observe significant detail, and knowing from past experience how difficult it is to make sure of the shape and colour of a beak against the background of the sea, I concentrated on the colour of the bird's upperparts. The grey of the mantle, which seemed a little darker than a Sandwich Tern's, stretched all the way over the rump and upper tail-coverts and graded without clear demarcation into a somewhat paler grey tail.

The bird had the white forehead but substantially dark nape of an adult entering winter plumage, but I also got the impression of some dark markings on the wing-coverts, which would be consistent with the *Handbook* description of a year-old bird. It did not call. In most respects I thought it much like a Sandwich Tern, and I observed no indication of either a different rhythm of flight or a different general outline, apart from the more compact appearance.

T. C. SMOUT.

(The only previous Scottish records of the Gull-billed Tern are of one in Orkney on 7th May 1913 (*Scot. Nat.* 1913: 154) and one in East Lothian on 11th September 1960 (*Scot. Birds* 1: 335)—ED.)

Bee-eater in North Sutherland

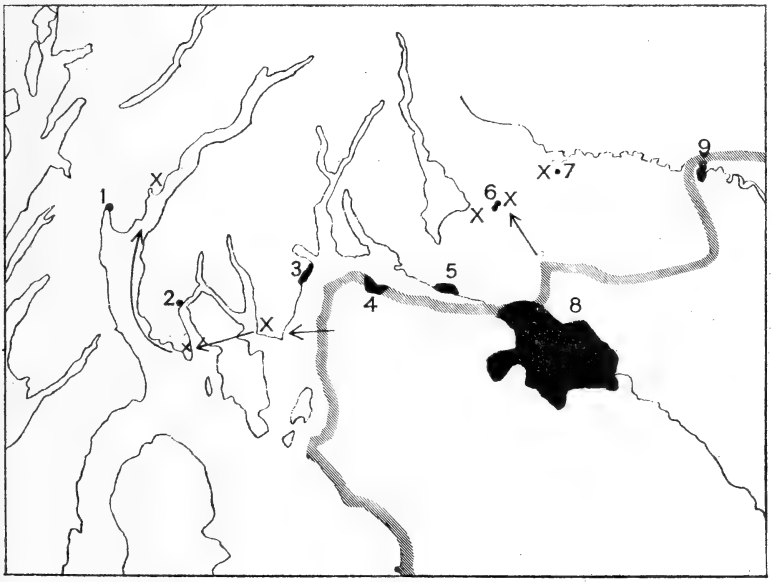
At the beginning of May 1966, from the 2nd to about the 4th, we had a visit from a Bee-eater at Durness. I was busy with the lambing at the time but saw it when I came home for my lunch. It was a most striking bird with deep green breast, yellow throat, and a deep rusty golden colour on the crown and back, and it flew in a most distinctive way like a Swallow. Fuller details have been supplied to the Rarities Committee.

D. E. MACKAY.

(Other 1966 records of three in Orkney from about 31st May to 5th June and one on Fair Isle on 13th June have been noted in *Scottish Birds* 4: 310.—ED.)

The Magpie in western Scotland

The Magpie in Scotland is extremely local in its distribution. Whereas it is common around Glasgow (8 on map) and to the south of the Clyde, it is never seen in Dumbarton (5). The shaded line on the map marks the western limit of the area in which it commonly occurs. The crosses north of Glasgow represent scattered observations in the Drymen (6) to Buchlyvie (7) area from which one may deduce that the



species is consolidating a recent advance, made possibly in the direction indicated, along the Blane Valley.

Within the last four years Magpies have been seen regularly at a few places in Argyll: Ardtyne Point, south of Dunoon (3), Ardlamont Point, south of Tighnabruaich (2), and Asknish Forest, north of Lochgilphead (1). It is reasonable to assume that these birds have spread from Renfrewshire along the lines indicated. It would be interesting, therefore, to hear of any occurrences of Magpies between these three points, perhaps in Bute or along the farmland forming the southeastern shore of Loch Fyne.

T. D. H. MERRIE.

Nuthatch in Kirkcudbrightshire

In the middle of October 1966 on a visit to Dumfries I saw a Nuthatch at a bird table and a nut basket in a garden a few miles west of the town. About a month before this I had a letter from my father telling me that he had seen one at the same place. We both know this bird well, with its blue-grey back, pinky front, dark line through the eye, longish straight sharp beak and short blunt tail, and can be quite sure that what we saw was a Nuthatch. It was seen again towards the end of November.

V. E. C. BALFOUR-BROWNE.

(It is worth looking for this species anywhere in the south of Scotland. Another winter record, of one in Perthshire between November 1963 and February 1964 (*Scot. Birds* 3: 83), is the only other Scottish record for over 20 years, but there have been rumours of one or two others which sounded quite possible, but for which we could not get adequate confirmation.—ED.)

Dippers diving in icebound loch

On 20th November 1966 about 1.30 p.m. I stopped on the B 846 overlooking Loch Kinardochy, Perthshire. The loch was almost frozen over, with one or two patches of open water. Amidst the snow and ice my attention was drawn to three birds on the ice. They would suddenly dive into the water and stay under for 10-15 seconds, then bob to the surface, where they swam about like miniature penguins, with their tails sticking up, before jumping clear of the water onto the ice again.

They were very small birds and I could not recognise them until I got the glasses out and found them to be Dippers. I was so fascinated by their behaviour that I watched for about 20 minutes before pushing on. During this whole time they were constantly diving in and out of the water. I have never

seen Dippers behaving in this way before, and indeed I have never seen Dippers anywhere but beside running water.

J. B. MURRAY.

(We referred this note to James Alder, who recently published a picture of two Dippers feeding at an ice hole (*Birds* 1: 9), and he commented: "I would describe this behaviour as characteristic. Dippers are forced by hard weather to come down from smaller streams to seek more open water. I have often watched them behaving like this (although from hundreds of stopwatch checks, I have never recorded dives of longer than 10 seconds). I assume that the Dippers described in the note were foraging at the loch's edge, where the water was shallow. The birds watched by me have never been in water more than 3 feet deep. One was diving from moving icefloes in the River Tyne; another used a small hole in thick ice and obviously foraged well under the ice; two males, both ringed, shared an ice hole, although they had been fighting over territory when the river was unfrozen. All of these birds were feeding outside their normal upstream territories and returned to them before dark. These are but a few typical examples from observations of many known individuals. It is obviously standard practice. What is strange is the shortage of observations by other ornithologists." —ED.)

Blue Rock Thrush in Orkney

At 1030 hrs GMT on 29th August 1966, in the courtyard of the lighthouse on North Ronaldsay, Iris Walker saw a bird which she described as about the size of a Starling but blue-grey all over except for darker wings and tail. It flew off towards the shore and was lost until the evening, when R. Smith found it under the air receiver tanks. When we flushed it I immediately saw the all-over slate-blue plumage. It was extremely shy, and only by following it about for 30 minutes was I able to write down a description. From my books I recognised it as a male Blue Rock Thrush, and as there was no British record of this species I telephoned Roy Dennis on Fair Isle.

On 30th August I watched it for an hour from 0600 hrs as it fed in a park by the lighthouse, most of the time close to the foundations of a wall which had been taken down. Its feeding movements were very quick; sometimes it would pick at the ground two or three times in succession, and once six times. It took what I thought was a fly from the wall, running quickly forward to get it. None of the food it picked up was recognised, but it definitely did not eat worms, as two Blackbirds were doing close by. Any approach by the

Blackbirds caused it to retreat, once with a short flight.

By the afternoon it had moved to the ruins of a house about a mile away, where I watched for another two hours. It would perch on a rock, make a short low flight to the ground, where it was hidden by the heavy growth, and return to its stone after about 30 seconds. Sometimes it cocked its head on one side. A Starling landed near it and I saw that it was about the same size as the Blue Rock Thrush and its legs were a similar length, but its tail and bill seemed longer and its body slimmer. A flock of Starlings landed on the roof of the house and the rock thrush shot under a stone at a surprising speed. It reappeared after a minute, first sticking its head out to look round. It then began to investigate under stones, and disappeared into an opening for ten minutes before emerging to perch on its stone again. It held its wings low as Blackbirds and Wheatears often do, and constantly flicked its tail up and down, occasionally with a side movement and a twirl like a shrike. The only call I ever heard was similar to a Fieldfare's.

On 31st August Roy Dennis and a party of ornithologists from Fair Isle chartered the *Good Shepherd* to visit North Ronaldsay, but in spite of a long search the bird could not be found. I had two further reports of it, the last on 6th September in a force 10 storm.

Description Head, nape, mantle, back, rump and scapulars slate-blue, decidedly lighter than the "Field Guide" illustration; upper tail-coverts slate-blue; tail dark slate-blue with tips very badly worn and about a third of outer right feather broken off; lesser wing-coverts slate-blue; greater wing-coverts slate-blue but dark towards ends, with extreme tips lighter; primaries dark slate-blue with slight paleness at tips; ear coverts slightly darker than head, showing fairly plainly in good light; eyestripe, slightly darker than head, not noticeable except in very good light; chin, throat, breast, belly and axillaries slate-blue; under wing-coverts slate-blue; primaries slate-blue below, seeming darker than above; bill dark brown, paler on lower mandible, especially at base; legs dark brown.

KENNETH G. WALKER.

(The identification of this bird is accepted by the Rarities Committee, but in view of the number of Blue Rock Thrushes that are now imported it is impossible to be sure that the bird was not an escape. The damaged tail and the fact that this is not a strongly migratory species indicate the need for caution.—ED.)

Greenish Warbler in Berwickshire

Under a dull sky at about 0930 hrs BST on 15th October 1966 I was engaged in a count of grounded night migrants concentrated round the loch behind St Abbs Head. Near the mid point of the western shore an isolated clump of mature

sycamores held about 20 small birds, mainly Goldcrests and Robins but also several Chiffchaffs and a cock Blackcap.

Whilst watching these birds from the adjacent slope (I was some 20 yards away and above the tree canopy) I spotted a noticeably light-coloured *phylloscopus* moving the canopy of the nearest two trees. Compared to two or three Chiffchaffs moving about in the same foliage it was a paler yet brighter bird. It was also slimmer (though overall its length appeared similar) and much more active, constantly flicking its wings and tail. After two or three minutes it came into open branches and I noted that there appeared to be a light thin bar on the left wing. As several of the Chiffchaffs were showing a light shade on the greater coverts (as they often do) I was not immediately certain that the bar was real. I therefore moved closer and lower down the slope to a position still slightly above and under 15 yards from the bird. From there I saw that the left wing-bar was whitish and a definite plumage mark. On the right wing the bar was slightly less marked, appearing as a thin greyish line.

Realising that the bird was therefore one of the 'single-barred' leaf warblers I then concentrated on the head. This showed a distinct white supercilium, from bill to end of ear coverts, and a noticeably dark line through the eye, both under a greyish-toned crown. The bill was similar in proportion to a Chiffchaff's, which indicated that the bird was a Greenish Warbler. I then switched my attention to the legs and feet. The tarsi were grey, but not as dark as the legs of the Chiffchaffs, and the feet showed a greenish tinge. I therefore concluded that the bird was in fact a Greenish Warbler, a species that I had seen twice before.

A fully annotated field sketch was made and this forms the basis for the following description and a finished coloured drawing made on my return to Edinburgh.

A lighter, whiter bird overall than Chiffchaff, with upperparts greener, greyer, cleaner, less brown, and underparts whiter, brighter. Obvious against dark sycamore canopy, easy to pick out, not getting lost like Chiffchaff. Slimmer than Chiffchaff but same length overall. Very energetic, more so than Chiffchaff, constantly flicking wings and tail. Head well marked with thin white superciliary, fading at end of ear coverts, and dark line through eye, both more prominent than on Chiffchaff. Head less domed than Chiffchaff's and finer. Greyish wash over crown and nape. Dusky patches on sides of chest, surprisingly yellow wash in mid-chest; greenish-yellow wash along top of flanks; white throat and belly. Left wing-bar whitish, more prominent than right; pale but not bright fringes to folded secondaries. Light on rump, contrasting with tail. Thin weak bill. Legs grey (not as black as Chiffchaff); greenish at feet.

D. I. M. WALLACE.

(This is the second record for Forth and the first for the

Scottish mainland. The species was first recorded in Scotland in 1945. Between then and 1961 there were six records from Fair Isle and one each from Whalsay and the Isle of May—one at the beginning of June and the others between 15th July and 19th September.—Ed.)

Pallas's Warbler at Fair Isle—a new Scottish bird

Fair Isle experienced southeast winds, due to an anticyclone over northern Europe, from 6th to 11th October 1966. These winds produced large numbers of thrushes, a record total of 1500 Bramblings, and several Richard's Pipits, Great Grey Shrikes and Scarlet Grosbeaks.

After a morning of rain on 11th October my wife and I found a Pallas's Warbler beside a building near the Bird Observatory. G. J. Barnes and D. Parkin were soon on the scene and we watched it for about five minutes as it fed on the ground and then in thistles. It was very confiding and at one stage was feeding only six feet from me. It fed busily in the vegetation and made short sallies after small flies, like a Goldcrest. Quite suddenly it flew off over North Haven and landed in the cliffs; we did not see it again.

It was a very small warbler, even slightly smaller than a Yellow-browed Warbler. It was rather like that species in colour, but the upperparts were greener, more Firecrest colour. The rump was yellow and showed as an obvious yellow patch when the bird was in flight. The head pattern was most distinctive, with a prominent yellow crown stripe and a long yellow superciliary in front of, over and behind the eye, being brighter yellow in front of the eye. The wings were greenish with two creamy-yellow wing-bars formed by the tips of the median and greater coverts, the latter being more prominent. The tertials were fringed creamy-yellow. The tail was short and greenish. The underparts were white, suffused yellowish on the sides of the breast and flanks. The legs, bill and eye were similar to Yellow-browed Warbler. It did not call.

This is the first record for Scotland and the nineteenth for Great Britain. This rare species, which breeds in south Siberia and normally winters in southeast Asia, has been becoming more frequent in England, in late autumn, during the last decade, and seventeen of the eighteen English records have been since 1951.

Roy H. Dennis.

Current Notes

Compiled by P. J. B. SLATER

(Key to initials of observers : D. G. Andrew, R. S. Baillie, I. V. Balfour-Paul, Dr D. A. Bannerman, W. T. G. Bates, Miss P. G. T. Baxter, G. Bennett, F. N. Betts, H. Boase (HBs), H. Boyd (HBd), T. Boyd, W. Brotherston, Miss E. Brown, D. G. Bruce, D. Buchan, N. G. Campbell, J. Carson, R. A. Cheke, D. Coutts, Miss V. C. Cowan, J. K. Cowden, C. N. L. Cowper, G. M. Crighton, W. A. J. Cunningham, R. H. Dennis, G. A. Dickson, R. C. Dickson, Dr I. T. Draper, M. M. Draper, J. Dunbar, Mrs J. P. Dunlop, A. Dunthorn, W. M. M. Eddie, M. J. Everett, K. Forrest, J. E. Forrest, I. Gibson, Mrs J. A. R. Grant, P. Grubb, T. Halliday, C. G. Headlam, M. J. Helps, R. Hewson, D. C. Hulme, Mrs E. Hunter, E. N. Hunter, E. T. Idle, A. Japp, R. A. Jeffery, Dr D. Jenkins, P. Johnson, A. R. Kitson, D. J. Law, R. M. Leaney, A. F. Leitch, J. Lister (JLr), J. Lockerbie (JLb), D. Macdonald, D. W. R. Macdonald, M. A. Macdonald, M. K. Macduff-Duncan, Dr H. N. MacLachlan, A. T. Macmillan, M. P. Macmillan, R. Marrs, Mrs J. Matthews (JMs), Prof. M. F. M. Meiklejohn, T. D. H. Merrie, J. Mitchell (JMl), M. Morrison, C. C. I. Murdoch, D. J. Norden, D. W. Oliver, A. Paterson, R. K. Pollock, J. A. Pollok-Morris, Mrs I, Rainier, A. D. K. Ramsay, G. A. Richards, W. K. Richmond, I. B. Roy, Dr M. Rusk, W. Russell, Miss M. Salmond, J. G. Selwyn, J. R. T. Shanks, Mrs A. F. W. Sharp, P. J. B. Slater, Mrs E. M. Smith, K. G. V. Smith, R. W. J. Smith, D. M. Stark, A. G. Stewart, R. A. Straton, R. L. Swann, C. Tait, I. Taylor, Miss V. M. Thom, B. Thurston, R. B. Tozer, R. J. Tulloch, L. A. Urquhart, K. Walker, G. Waterston, A. D. Watson, J. Watt, Hon. D. N. Weir, G. T. White, Dr D. F. Whyte, Mrs J. A. Whyte, W. H. Wild, D. R. Wise.

(Unless otherwise stated January to April dates refer to 1967 and all others to 1966.)

Distribution

Observations made before 1st October 1966 are excluded from this section except where they are used to amplify more recent topics.

In Shetland **Red-throated Divers** were reported from many voes in January and February, whereas usually only odd birds winter (RJT).

In January two **Great Crested Grebes** were inland at Castle Semple Loch, Renfrewshire, on 22nd (LAU), and an immature was at Loch of Lowes, Perthshire, on 28th (HBs). A **Red-necked Grebe** was seen off Innermessan on Loch Ryan, Wigtownshire, on 17th December (RCD), and three off Seafield, Midlothian, on 5th February were further up the Forth than usual (DGA). In the west, a **Black-necked Grebe** was seen at Loch Ken, Kirkcudbrightshire, on 6th January (AP); one was on Loch Ryan on 27th January (JGS), and two were there on 10th March (GAR). Two were near the Lomond Hills in Kinross-shire on 31st December (TDHM); two were

off Gullane Point, East Lothian, on 28th January (CT), and one in summer plumage was there on 26th March (PJ, RLS).

A **Cormorant** showing the characteristics of the southern race, with the sides and back of its neck white, was seen at Eastfield, Midlothian, on 26th February (MFMM, DRW). Nearby, in Leith Docks, about 30 **Shags** were noted on 18th February and about 10 on 5th and 20th March, the locality being unusually inshore and urban for this species (DGA); though odd birds occasionally appear on the tidal part of the Water of Leith (ATM).

A drake **American Wigeon** was seen at Inverness from 16th December to 9th March, almost certainly the same bird as in the two previous winters (3: 360; 4: 294) (RHD, MM). A male **Pintail** in an unusual area was one seen in a flock of about 400 Wigeon on Hoselaw Loch, Roxburghshire, on 31st December (RSB). A drake **Tufted Duck** was seen at Aberlady Bay, East Lothian, on various dates between 29th December and 24th March (GB, PJ, DWRM, MAM).

A female **Long-tailed Duck** was on Loch Leven, Kinross-shire, on 19th November (WTGB), and a pair was on Lindores Loch, Fife, on 12th February (JW). One, perhaps the same as that previously seen on Carlinwark Loch (4: 381), was on Loch Ken from 6th January until at least 4th March (AP, ADW); two were there on 11th February (RBT). On the sea, a particularly high count of 423, mostly males, was made at Leven, Fife, on 12th March (DWO). In Ayrshire, 33 were seen at Barassie on 20th January and at least 20 on 16th March (GAR). Also in that county, a duck and two drake **Velvet Scoters** were recorded at Turnberry on 5th February (AGS), and a single bird was at Barassie on 12th March (GAR). Four **Goosanders**, including one drake, were at Morton Lochs, Fife, on 5th February (DWO).

Wintering **Smews** have been seen in the following places:

River Conon, E. Ross—redhead on 18 Nov (CGH).
Montrose Basin, Angus—♂ on 18 Mar (ADKR).
Kilconquhar Loch, Fife—redhead on 5 Feb (PGTB).
Roseberry reservoir, Midlothian—♂ on 26 Feb (DGA), and 5 Mar (EMS, RWJS).
Castle Semple and Barr Lochs, Renfrew—♂ and redhead on several dates between 15 Jan and 18 Mar (GW, GTW, WHW); ♂ and 2 redheads on 22 Feb (GAR).
Rowbank reservoir—♂ and redhead on 31 Mar (GAD, IG).
Doonfoot, Ayr—♂ on sea after frost on 5 Jan (GAR).
Near Stranraer, Wigtown—♂ shot on 11 Jan (JKC).

Grey Lag Geese were noted going south on Speyside in Inverness-shire as late as 5th February, and they had started going north by 1st March (DNW). An early departure from their wintering area was also noted in Fife (DWO).

The following are reports of **White-fronted Geese** in less usual areas:

Loch Eye, E. Ross—45 Greenland birds on 23 Feb (RHD).
Aberdeen—9 over city on 23 Feb (ADKR).
Dunning, Perth—7 with Pinkfeet on 27 Nov and at least 4 on 8 Jan (TDHM).
Tibbermore, Perth—European bird on 10 Feb (VMT).
Near Kinkell Bridge, Perth—2 Greenland birds on 4 Mar (VMT).
Near Kilconquhar—1 on 12 Feb (DWO).
New Cumnock, Ayr—18 on 18 Dec (JLb).

Despite efforts to locate more, the only **Bean Geese** found in Kirkcudbrightshire during the winter were eight at Castle Douglas on 9th January (ADW). Outside their usual range 20 **Pink-footed Geese** were at Bridgend, Islay, on 19th February (MFMM).

Five **Snow Geese** have been seen in various localities during the winter. In Fife, they were in the area of Flisk and Balmarino on 21st October, 23rd November and 15th January (HBd), and again on 8th March, having been at Kingskettle on 25th February (JRTS). What were presumably the same birds were in Perthshire with Greylags at Powgavie on 6th March and with Pinkfeet on Mugdrum Island on 12th (VMT). It is probable that they had escaped from a collection in Fife. Two were at Loch Leven on 31st December (WTGB); one at Aberlady on 4th January (DJL); and two at Loch Eye from 19th February until at least 10th March (CGH). Birds of definite species were a blue-phase **Lesser Snow Goose** on Mugdrum Island on 12th March (VMT), and a **Ross's Goose** with Greylags near Meigle, Perthshire, on 5th March (JMs).

A Pale-bellied **Brent Goose** was at Dunning, Perthshire, on 27th November and 25th December (TDHM). Two Dark-bellied birds were seen at Loch Ken on 11th February (RBT), and one was at Kilconquhar between 11th February and 11th March (DWO, JW).

The more noteworthy occurrences of **Barnacle Geese** have been as follows:

Loch Winless, Caithness—1 with Whitefronts on 5 Mar (JARG).
Old Aberdeen—2 going south on 17 Feb (ADKR).
Kinkell Bridge, Perth—16 on 22 Jan (VMT).
Carsebreck, Perth—19 on 4 Mar (VMT).
Loch Leven, Kinross—2-4 in Nov and Dec (WTGB).
Endrick Mouth, Stirling/Dunbarton—2 on 1 Jan (TDHM), 5 Feb, 6 Mar and 26 Mar (ETI, JMl).
Muasdale, Kintyre, Argyll—9 on 12 Mar (WR).
Clachan, Kintyre—4 on 12 Mar (WR).

Further counts of **Whooper Swans** confirm the low proportion of immatures previously reported (4: 383). At Kingskettle, the winter maximum of 312 apparently included only

three immatures (JRTS), and the same number was found in a flock near Loch Garten, Inverness-shire, where the total present varied between 68 and 78 from January to March (RHD). On 1st January an adult **Bewick's Swan** was at Barr Loch (LAU), and five were at Bogside, Ayrshire, on 18th (GAR). Two adults and three immatures were found on ponds near Gartocharn, Dunbartonshire, on 15th January (ETI), and six birds were in a field near Aberlady on 22nd February (DJ).

Rough-legged Buzzards have already been reported in Glenesk, Angus/Kincardine, in the early part of the winter (4: 384); two were still there on 15th January and again on 6th February (GMC, RAC). The bird reported at Evanton, Easter Ross, was still there on 15th March (CGH). In Midlothian, one was seen at Glencorse on 30th December (PJ, RLS), and one was at Garvald, near Heriot, on 29th January (WB). Several have wintered in Shetland on Yell and Unst, the most seen at once being three on Yell and two on Unst, and one was on Fetlar on 22nd February (RJT).

Early **Ospreys** were one seen flying over Upper Loch Torridon, Wester Ross, on 10th March (DFW, JAW), and one perched on a fir tree near Cumnock, Ayrshire, on 27th (RM).

Between 20th January and 20th February a **Peregrine** was seen on five occasions in the area of Carlton Place, Glasgow, whither it was no doubt attracted by the large number of pigeons (LAU).

A cock **Pheasant** seen on Bernera, Lewis, on 25th March was a survivor from several hatched under a hen some five or six years ago and allowed to fend for themselves (WAJC).

Most of the birds which, though resident in this country, are summer visitors to Speyside, were found on their breeding grounds there earlier than usual (RHD, DNW). **Oystercatchers**, **Curlews** and **Lapwings** were all present by early February, left during a storm shortly afterwards, but were back again by 20th (DNW). Oystercatchers well inland during January were pairs at Endrick Mouth on 26th (RKP), and on an island in the Tweed at Kelso, Roxburghshire, on 28th (RSB).

Ten **Black-tailed Godwits** were seen feeding up to their chests in water at Troon, Ayrshire, on 22nd October (RBT). The bird previously mentioned at Barassie (4: 384), wintered there, being seen up to 4th March (GAR). One was seen at the Peffer Burn, Aberlady, on 5th February (RSB). Also at Aberlady, a wintering **Spotted Redshank** was noted on 8th January (WKR), 21st January (GB), 12th February (WMME, PJ, WR, RLS) and 24th March (MAM). One, probably the same as reported previously (4: 384), was at Broomberry,

just south of Ayr, on 15th January (RBT), and one was at Tyninghame, East Lothian, on 8th (CT). A **Greenshank** was back at Upper Loch Torridon by 12th March—an early date (JAW).

There are several records of **Ruff** seen in the first three months of the year. Two males were at Aberlady on 15th January and 11th February (WKR), and in a field near there at least 14 were seen on 4th February and 18 on 18th (DJ). On 16th February a male in near summer plumage was seen at a muddy pool near Langbank, Renfrewshire (RAJ). In March, a male was at Fife Ness on 29th (PGTB); two birds were at Skinflats, Stirlingshire, on 24th (JC, IT); and two were at Maybole, Ayrshire, on 26th (RBT).

In a gale on 18th December a dark-phase **Arctic Skua** was seen amongst Herring Gulls at Loch Keills—an arm of Loch Sween, North Argyll (EH, IR).

As was the case with waders, **Lesser Black-backed Gulls** were noted inland unusually early. On 25th February 25 were at Errol Airfield, Perthshire (VMT), and nine were at Lindores Loch (JW). The first in Lewis was slightly early, on 23rd March (WAJC). A **Herring Gull** which was larger than normal and had darker wings and black patches round the eyes was noted at Belhaven, East Lothian, on 29th January. It was thought to belong to one of the Siberian races (MFMM). An immature **Glaucous Gull** was at Paisley Moss, Renfrewshire, on 11th and 18th March (IG, GTW). Single immature **Iceland Gulls** have been observed at Arbroath harhour, Angus, on 25th February (JD); at Oban, Argyllshire, on 25th March (WMME, DJN); and at Doonfoot on 18th February, in the same place as an adult was seen on 15th (GAR).

Though they do not usually overwinter in the area, **Little Gulls** have been seen regularly off Leven, Fife, this year, the maximum being six on 12th March (DWO). Further afield, an immature was at Loch of Strathbeg, Aberdeenshire, on 5th October (JD), and an adult was on North Ronaldsay, Orkney, on 3rd February (KW). A **Kittiwake** away from the sea was found dead on Inchcailliach, Loch Lomond, in Stirlingshire, on 5th February (RAJ, JMl, BT).

Single winter-plumage **Black Terns** seen in October were over the marsh at Summerston, Glasgow, on 8th and 9th (WMME, WR), and off Gullane Point on 22nd (DGB, PJ, AFL, DWRM).

Outside Shetland, **Little Auks** have been found in the following counties:

Caithness—about 15 found dead in Dounreay, Dunnet, Murkle and Sinclair Bays between Jan and Mar. 1 swimming in Scrabster harbour on 2 Jan (per DMS).

E. Ross—1 found alive on 27 Jan on hill farm between Dingwall and Evanton died subsequently (CGH).

Moray—1 found ashore at Garmouth on 8 Jan and later released (RH).

Fife—1 found dead at St Andrews on 17 Feb; 1 dead at Fife Ness on 15 Feb (PGTB); and 1 recently dead there on 5 Mar (DWO).

E. Lothian—1 seen close in at Aberlady on 29 Jan (DJ).

A **Black Guillemot** was found dead inland at Loch Watten, Caithness, on 29th January (per DMS).

A **Little Owl** was found sitting on the road, apparently stunned, near Dunragit in Wigtownshire on 3rd November; it was released in a nearby field (JKC). A **Kingfisher** was recorded at Montgreenan, Ayrshire, on about 1st December (DNW). Earlier, one had been at New Cumnock in the same county on 31st August and 21st September (JLb).

A **Shore Lark**, the first recorded in Edinburgh, was found at Leith Docks on 5th January (DGB, MAM). It remained in the area for over a month and was seen by many people, the last report being on 11th February (WKR).

Outwith its normal range, a **Magpie** was noted near Hoselaw Loch, Roxburghshire, on 18th February (RSB). A pair of **Jays** was present at Montgreenan, Ayrshire, from the beginning of December till at least 14th January (DNW).

Several **Stonechats** have been recorded wintering in East Lothian. An adult male was seen at Aberlady on 30th October (WMME, DJN, WR), 4th March (NGC, PJBS), and 24th March (CT); and it was seen with a female on 18th (PJ, RLS). A male was at Dirleton on 12th February (RSB), and three were there on 25th (PJ, RLS); and a female was recorded at Tyninghame on 12th March (TB, IBR, EMS, RWJS). In Shetland, a male was at Grutness for a week from 7th March (DC), and a female was noted at Cunningsburgh on 13th (RHD). In the autumn, single female **Black Redstarts** were seen at St Andrews on 19th October (RAC), and at Fife Ness on 20th (JARG).

The following are reports of wintering **Blackcaps**:

Inverness—♂ in garden on 9th and 16 Feb; ♀ in another garden on 11 Feb (MR).

Banff—♀ in garden from 22 Feb to at least 29 Mar (AFWS).

Maxwell Park, Glasgow—♂ from 20th to 29 Jan (JPD).

Bonnyrigg, Midlothian—2 ♂♂ in separate gardens early in Jan (per RWJS).

A migrant **Red-breasted Flycatcher** was on St Kilda on 14th October and a very late one was there from 5th to 8th November (PG).

There are good numbers of **Great Grey Shrike** records to add to those already given (4: 389), though these should be compared with the previous list as some probably refer to the same individuals:

Ross—1 at Garve on 8 Mar (CGH), 25 Mar (MKM-D), 7 Apr (CGH); 1 in Torridon/Kinlochewe area on 24 Feb (EB), 2 on 25 Feb (ENH), 1 on 6 Mar (CGH).

Inverness—1 at Loch Moy on 5 Jan; at least 1 at Nethy Bridge from 11 Jan to 25 Feb (RHD); 1 near Coylumbridge on 23 Jan (RH).

Moray—1 at Grantown between 14 Jan and 8 Feb (RHD).

Nairn—1 in Glenferness on 14 Feb (RHD).

Perth—1 at Bridge of Gaur, Loch Rannoch, on 19 Mar (PGTB).

Angus—1 at Balgavies Loch on 15 Jan (GMC, RAC).

Argyll—1 at Loch Don, Mull, on 10 Nov and nearby on 12 Feb (FNB); 1 at White House of Aros, Mull, on 28 Feb (VCC, MS). 1 between Taynuilt and Connel on 25 Oct (KF, MPM).

Stirling—1 at Mugdoch Wood on 14 Jan (WMME); 1 at Blanefield on 12 Mar and 3 there on 19th (ITD, MMD); 1 at Endrick Mouth (on Dunbarton border) on 1 Jan (TDHM), 14 Jan (ETI, JMI), 13 Feb (RKP), and 18-19 Mar (ETI, AGS).

Glasgow—1 at Summerston on 7 Jan (WMME) and 20-22 Jan (WR).

Renfrew—1 at Langbank on 15 Jan was seen to swoop behind a hedge and reappear with a Hedge Sparrow in its beak (RAJ); 1 at Lochwinnoch on 12 Mar (LAU).

Midlothian—1 still present at Fountainhall, Stow, up to 30 Mar (see 4: 390) (HNM); 1 flying over reeds at Duddingston on 9 Dec (PJ); 1 at Glencorse on 4th and 5 Jan (MJE, JLr).

Ayr—1 at Kilantringan Loch on 9 Feb (RBT); 1 at Muirhead reservoir on 18 Mar (JAP-M).

Kirkcudbright—1 on west side of Loch Ken on 6 Jan (AP).

North of their normal range, four **Goldfinches** were noted in the outskirts of Dornoch, Sutherland, on 4th February and six were there on 11th March (DM). A **Redpoll** of the Mealy race was seen at Aberlady on 29th December (DWRM) and 25th February (MFMM, DRW); a particularly pale individual was there on 11th February (WKR).

Further reports of **Bramblings** confirm the impression that this year has been exceptional, certainly in the south of the country, the numbers in the largest flocks having proved very hard to assess. The largest concentration was of at least 3000 and possibly up to 5000 near Broughton, Peeblesshire, on 23rd and 25th January (DAB). At Middleton, Midlothian, there was a flock of about 1000 on 1st January (CNLC), and at least 2000 on 2nd March (IVB-P). Other counts have been much smaller, suggesting that the numbers seen earlier in the winter had spread out. About 200 between Heriot and Stow, Midlothian, on 8th January (DB, RAS); 300 near Falkirk, Stirlingshire, on 23rd December (AJ); 250 near Hoselaw Loch on 27th February (RSB); and at least 200 in the vicinity of Forfar, Angus, on 2nd April (JEF), are the highest figures.

Lapland Buntings have already been mentioned near Tain, Easter Ross, in December (4: 392); ten were still in the area on 14th January (CGH). Further south, singles have been reported from Aberlady on 29th December and 7th January

(DWRM, DWO); the shore at Ayr on 17th February (AGS); and Skinflats on 5th and 7th April (JC, IT).

Earlier observations—before 1st October 1966

On 7th August 1966 a **Bittern** was seen at close quarters beside Loch Connel, Wigtownshire, for a short time before it rose vertically into the air and flew off (TH).

An interesting observation is of a compact flock of about 20 **Skuas**, in all probability Arctic, and mostly or all light-phase birds, flying northeastwards low above the trees near Loch Garten, Inverness-shire, on 24th May 1966 (CCIM).

On 20th August 1966 two **Jays** were noted in the plantation of Pitcowdens, Durris, in North Kincardineshire, an area in which this species was recorded for the first time in 1961 (1: 460) (AD).

Some rather older records have come to light of birds seen at Rattray Head, Aberdeenshire. Between 1st and 6th September 1962, 47 **Sooty Shearwaters** were seen passing north (MJH, RML); in 1963, 23 were seen between 25th August and 5th September (ARK); and in 1965 three were seen on 25th September and 14 on 26th (MJH). Between 1st and 5th September 1962 a female **Marsh Harrier** was in the area, and two were present on 6th (MJH, RML), a date for which one was previously recorded (2: 256).

During the big fall of migrants in late September 1965 there was a **Wryneck** at Rattray Head on 28th, a **Red-breasted Flycatcher** on 26th and 27th, and an **Icterine Warbler,** the first for Aberdeenshire, on 27th (MJH). There are very few records of **Lapland Buntings** in Aberdeenshire, where one was at Rattray Head on 31st August 1962 (MJH, RML).

General observations on behaviour

Early return to their breeding grounds has been noted already in the main section for several species. Some others have been found nesting early—no doubt due to the mild weather. Two **Woodpigeon** nests with eggs were found on Speyside on 4th and 5th February (per RHD), and a bird was found sitting on eggs near Alness, Easter Ross, on 14th (CGH). There was a nest containing well-grown young at Culterty, Aberdeenshire, on 13th March and one at Evanton, Easter Ross, on 21st (CGH).

Snow Buntings on Ben Wyvis, Easter Ross, on 22nd February were found to be feeding on small flies dispersed at a density of about one per square yard all over the snow on top of the mountain above 2000 feet (DCH). The fly was later identified as *Leria modesta czernyi* (KGVS).

Requests for Information

Seabird Breeding Distribution Survey. In 1969 the Seabird Group will be conducting "Operation Seafarer," a general census of the seabirds breeding in the British Isles. This census will include the continuation of the Fulmar, Gannet and Kittiwake censuses falling due in that year, but will also include counts of selected other species to obtain for the first time a national count of the major seabirds breeding in these islands; this will provide the base from which future changes in their populations can be recognised.

To prepare this census the Group has set up its Breeding Censuses Committee, for which it has secured the services of James Fisher and Dr John Coulson as Chairman and Scientific Advisor respectively, and of George Waterston as Scottish Representative. The committee has decided to organise this summer a survey of the breeding distribution of seabirds in the British Isles, with the aim of establishing the presence or absence of each species at colonies in each coastal 10-kilometre square of the National Grid; it is hoped also to obtain rough estimates of the size of each colony, together with information on any special difficulties encountered in censusing that colony. If necessary the survey will be continued next year also. In this way it is hoped to obtain maximum information towards the success of Operation Seafarer in 1969.

Ornithologists living on the coast or holidaying there this summer are invited to complete survey cards for their area this year. Information from past years is also welcome, particularly for colonies in Scotland and Ireland or if the information has not been published in an established ornithological journal. Cards (one for each 10-km square and separate cards for each year) and any further information required may be obtained from the Census Committee Secretary, Raymond O'Connor, Department of Physics, Birkbeck College, Malet Street, London WC1.

Whooper Swans. There have been few young Whoopers with the wintering flocks this year. R. Hewson, 170 Mid Street, Keith, Banffshire, would like data from other parts of Scotland to compare with the situation at Loch Park, which he has studied since 1955. He asks for information on herd size, brood size and number of first-winter birds; and, in view of the smaller numbers wintering at Loch Park now, he would also be glad to hear of any recently colonised areas.

The Scottish Ornithologists' Club

ANNUAL CONFERENCE

The 20th Annual Conference and 30th Annual General Meeting will be held in the Hotel Dunblane, Perthshire, on 27th-29th October 1967. Bookings should be made direct with the hotels. The full programme will be given in the next issue of "Scottish Birds." The registration fee will be 10/-, and the Annual Dinner 25/- for those not staying in the Hotel Dunblane (both to be paid on arrival).

Hotels in Dunblane

Hotel Dunblane (Hydro) (Tel. 2551). Special Conference charge £7.11.0d (or 75/6 per day) including service charge, bed and all meals (except tea on Saturday afternoon) from Friday dinner to Sunday lunch, after-meal coffee, and the Annual Dinner (with wine or soft drinks). For less than a full day, bed and breakfast is 42/-, lunch 11/6 and dinner 17/6.

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Prices, except for the Conference Hotel, are provisional and should be confirmed.

LIBRARY ARRANGEMENTS

The Library Committee has formed a duplicate section of the Reference Library, consisting of standard reference books and runs of certain important journals. These are available, at the discretion of the Club Secretary, for lending out to students and others wishing to read up a particular subject. A list of books and journals in this section will be supplied on request.

Normally, not more than two items may be borrowed at one time, to be returned within two weeks. Borrowers will be asked to sign for the books when they take them out, on the understanding that they accept full liability for any loss or damage to the books. Requests for books sent by post will carry the same implication. Borrowers are asked to pay postage both ways and to make sure that the books are adequately packed when returned.

Books cannot be lent out from the Reference Library (except the duplicate section) but any item may be studied on the premises by arrangement with the Club Secretary.

Juniors who wish to choose a book for general reading will still be able to do so. The books available for lending in this way have been incorporated with the collection kept for members of the Young Ornithologists' Club, so that a wider selection is now available to both groups.

THE SCOTTISH ORNITHOLOGISTS' CLUB

THE Scottish Ornithologists' Club was founded in 1936 and membership is open to all interested in Scottish ornithology. Meetings are held during the winter months in Aberdeen, Ayr, Dumfries, Dundee, Edinburgh, Glasgow, St Andrews and elsewhere at which lectures by prominent ornithologists are given and films exhibited. Excursions are organised in the summer to places of ornithological interest.

The aims and objects of the Club are to (a) encourage and direct the study of Scottish Ornithology in all its branches; (b) co-ordinate the efforts of Scottish Ornithologists and encourage co-operation between field and indoor worker; (c) encourage ornithological research in Scotland in co-operation with other organisations; (d) hold meetings at centres to be arranged at which Lectures are given, films exhibited, and discussions held; and (e) publish or arrange for the publication of statistics and information with regard to Scottish ornithology.

There are no entry fees for Membership. The Annual subscription is 25/-; or 7/6 in the case of Members under twenty-one years of age or in the case of University undergraduates who satisfy the Council of their status as such at the time at which their subscriptions fall due in any year. Joint membership is available to married couples at an annual subscription of 40/-. "Scottish Birds" is issued free to members but Joint members will receive only one copy between them.

The affairs of the Club are controlled by a Council composed of the Hon. Presidents, the President, the Vice-President, the Hon. Treasurer, the Editor and Business Editor of "Scottish Birds", the Hon. Treasurer of the House Fabric Fund, one Representative of each Branch Committee appointed annually by the Branch, and ten other Members of the Club elected at an Annual General Meeting. Two of the last named retire annually by rotation and shall not be eligible for re-election for one year.

A Scottish Bird Records' Committee, appointed by the Council, produce an annual Report on "Ornithological Changes in Scotland."

An official tie with small white Crested Tits embroidered on it can be obtained in dark green or in navy blue by Members only from Messrs R. W. Forsyth Ltd., Princess Street, Edinburgh, or 5 Renfield Street, Glasgow, C.2 at a cost of 18s 9d post extra. A small brooch in silver and blue can be obtained for the use of Members of the Club. Price 3s 6d each from the Secretary, or from Hon. Branch Secretaries.

Forms of application for Membership, copy of the Club Constitution, and other literature is obtainable from the Club Secretary, Mrs George Waterston, Scottish Centre for Ornithology and Bird Protection, 21 Regent Terrace, Edinburgh 7. (Tel. Waverley 6042).

CLUB-ROOM AND LIBRARY

The Club-room and Library at 21 Regent Terrace, Edinburgh 7, will be available to Members during office hours, and on Wednesday evenings from 7 to 10 p.m. during the winter months. Members may use the Reference Library and borrow books from the Lending Library. Facilities for making tea or coffee are available at a nominal charge and Members may bring guests by arrangement. The Aldis 2" x 2" slide projector and screen can be used for the informal showing of slides at a charge of 2s 6d per night to cover the replacement of bulbs.

NOTICE TO CONTRIBUTORS

All contributions should be sent to Andrew T. Macmillan, 12 Abinger Gardens, Edinburgh 12. Attention to the following points greatly simplifies production of the journal and is much appreciated.

1. Papers should if possible be typed with double spacing. All contributions should be on one side of the paper only.

2. Topical material for Current Notes should reach the Editors **before the end of March, June, September and December,** at which time they begin to compile this section. All other notes should be sent promptly but important items can be fitted in until a month or so after these dates.

3. Proofs will normally be sent to authors of papers, but not of shorter items. Such proofs should be returned without delay. If alterations are made at this stage it may be necessary to ask the author to bear the cost.

4. Authors of full-length papers who want copies for their own use MUST ASK FOR THESE when returning the proofs. If requested we will supply 25 free copies of the issue in which the paper is published. Reprints can be obtained but a charge will be made for these.

5. Particular care should be taken to avoid mistakes in lists of references and to lay them out in the following way, italics being indicated where appropriate by underlining.
DICK, G. & POTTER, J. 1960. Goshawk in East Stirling. *Scot. Birds* 1:329.
EGGELING, W. J. 1960. *The Isle of May.* Edinburgh and London.

6. English names should follow *The Handbook of British Birds* with the alterations detailed in *British Birds* in January 1953 (46:2-3) and January 1956 (49:5). Initial capitals are used for names of species (*e.g.* Blue Tit, Long-tailed Tit) but not for group names (*e.g.* diving ducks, tits). Scientific names should be used sparingly (see editorial *Scottish Birds* 2:1-3) and follow the 1952 B.O.U. *Check-List of the Birds of Great Britain and Ireland* with the changes recommended in 1956 by the Taxonomic Sub-Committee (*Ibis* 98:158-68), and the 1957 decisions of the International Commission on Zoological Nomenclature (*Ibis* 99:369). When used with the English names they should follow them, underlined to indicate italics, and with no surrounding brackets.

7. Dates should normally be in the form "1st January 1962", with no commas round the year. Old fashioned conventions should be avoided—*e.g.* use Arabic numerals rather than Roman, and avoid unnecessary full stops after abbreviations such as "Dr" and "St".

8. Tables must be designed to fit into the page, preferably not sideways, and be self-explanatory.

9. Headings and sub-headings should not be underlined as this may lead the printer to use the wrong type.

10. Illustrations of any kind are welcomed. Drawings and figures should be up to twice the size they will finally appear, and on separate sheets from the text. They should be in Indian ink on good quality paper, with neat lettering by a skilled draughtsman. Photographs should either have a Scottish interest or illustrate contributions. They should be sharp and clear, with good contrast, and preferably large glossy prints.

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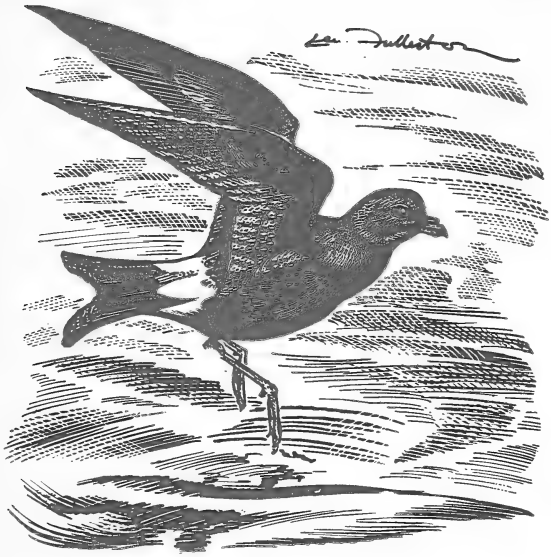

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Vol. 4 No. 7 *Autumn 1967*

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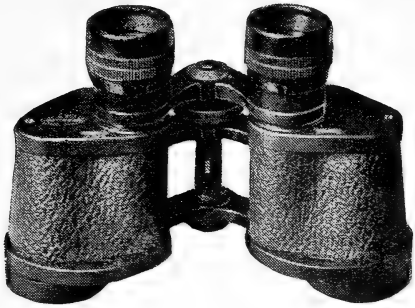

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Edited by Andrew T. Macmillan, 12 Abinger Gardens, Edinburgh 12.
Assisted by D. G. Andrew, T. C. Smout and P. J. B. Slater.
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THE JOURNAL OF THE SCOTTISH ORNITHOLOGISTS' CLUB

Vol. 4 No. 7 **Autumn 1967**

Edited by A. T. MACMILLAN with the assistance of D. G. ANDREW, T. C. SMOUT and P. J. B. SLATER. Business Editor, T. C. SMOUT.
Cover Design (Leach's Petrel) by LEN FULLERTON.

Editorial

Vane Farm. In January the R.S.P.B. bought this 300-acre farm on the south shore of Loch Leven, one of the most important waters for wildfowl in the country. The farmer is sympathetic to conservation and has managed the land in such a way that it attracts large numbers of geese in winter; he will continue to farm the arable land as the R.S.P.B.'s tenant.

Vane Farm is a fine vantage point for viewing the ducks and geese on Loch Leven, and an observation post equipped with powerful binoculars will be built. The idea is to develop the reserve partly as a refuge and partly as an educational area, where people can come and see the birds and learn something about them without disturbing them. A nature trail is planned on the birch-clad hillside above.

In announcing the purchase of this important new reserve the R.S.P.B. also revealed plans for two new reserves in Wales and one in England which include Kites and Black-tailed Godwits among their breeding birds. Money is needed to pay for these reserves and to enable the society to take the chance to buy other good sites which may come on the market from time to time, and a New Reserves Appeal for £100,000 has been launched. An attractive brochure with details of the plans for these reserves and of the different ways in which one can help may be had from George Waterston, Scottish Centre for Ornithology and Bird Protection, 21 Regent Terrace, Edinburgh 7.

A vintage year. Rare Scottish birds have been much in the news in 1967, with huge portraits and full coverage in the daily and Sunday press. First it was a lone Crane striding about an Argyll farm which sent reporters and cameramen hurrying off to the Mull of Kintyre. Then out to the Bass Rock following reports that a distinguished zoologist had accidentally photographed a Black-browed Albatross among the Gannets and would have fallen off with surprise had the slope been steeper. After a whole day waiting for the bird

they returned with a fine series of pictures, and christened it Albie the albatross.

Next came front-page photographs of the eggs of Snowy Owls, revealed by the R.S.P.B. to be nesting on Fetlar, where parents forbade their children to go on the moor for fear of attack. Word of this excitement had already spread all over Shetland and so many people were heading for Fetlar that there was nothing for it but to set up a full-scale show on the lines of Operation Osprey. Meanwhile the R.S.P.B.'s Loch Garten Ospreys were rearing a healthy brood of three young, the second pair again failed to hatch their eggs (which were then sent for analysis), and it was announced that, at last, a third pair had been found breeding in Scotland, with two young in the nest.

Such spectacular items made the headlines, but on top of all this it was a good spring for interesting migrants, including unusual numbers of Black and White-winged Black Terns, Icterine and Grasshopper Warblers, Red-headed Buntings (at least six escaped cocks!) and many others; and an unprecedented scatter of summering and breeding Redwings. Sober accounts of these things will appear in time in *Scottish Birds*. A vintage year indeed.

Protection of Birds Act 1967. At the time of the last General Election this measure had almost become law, but with the dissolution of Parliament it had to start over again (*Scot. Birds* 4: 205). It has been making unobtrusive progress since then, and in July it reached the statute book, so quietly that hardly anyone noticed. The provisions have already been described (4: 61), and should serve to simplify and therefore improve enforcement of the law. Perhaps the change of widest interest is that the Secretary of State no longer has power to deprive the eggs of common wild birds of the general protection given to all birds and their eggs. Children can be taught to watch birds rather than rob them, and teachers will no longer have the impossible task of explaining that it is right to take the eggs of some birds and wrong to take those of others.

Current literature. Recent references of special interest to Scottish ornithologists include:

Bird life in the islands. E. Balfour, 1966. In *The New Orkney Book* (J. Shearer *et al.*), ch. 15, pp. 103-111. Includes status list of breeding and other birds.

The arrival and departure of auks at St Kilda, 1961-62. W. E. Waters, 1967. *Seabird Bull.* 3: 19-20. Also notes for other sites.

The Hatton Castle rookery and roost in Aberdeenshire. A. Watson, 1967. *Bird Study* 14: 116-119.

Territory, behaviour and breeding of the Dipper in Banffshire. R. Hewson, 1967. *Brit. Birds* 60: 244-252.

Migration-seasons of the *Sylvia* warblers at British bird observatories. P. [E.] Davis, 1967. *Bird Study* 14: 65-95. Includes full discussion of Fair Isle data.

Olive-backed Pipits on Fair Isle: a species new to Britain and Ireland. R. H. Dennis, 1967. *Brit. Birds* 60: 161-166, plate. Seen 17th-19th October 1964 and 29th September 1965.

Birds on Out Skerries, Shetland, 1966

R. J. TULLOCH

(Plates 49-51)

Introduction

A small group of low-lying, rocky and rather barren islands called Out Skerries lies some ten miles east of the Shetland Mainland, and about the same distance south and east of the two larger islands of Yell and Fetlar. Its nearest neighbour, Whalsay, is about five miles to the southwest, between Out Skerries and the Shetland Mainland.

The group comprises three main islands, surrounded by numerous stacks, holms and reefs which make navigation in the area rather tricky. On the most easterly of these, Bound Skerry, there is a large lighthouse, the most prominent feature of the Out Skerries landscape.

Of the three main islands, the total area of which is only about 600 acres, only Bruray and Housay are inhabited, and these are connected by a bridge. With the third island, Gruney, they combine to form an excellent natural harbour, and this is undoubtedly the reason why there is a population of about 90 people whose living is made almost entirely from the sea. Three large modern fishing boats prosecute the seine net and herring drift-net fishing, and smaller boats fish for lobsters around the rocky shores.

There is only a thin covering of soil, covered with short grass, which in places has been painstakingly cleared of stones to provide little fields where some potatoes and 'Shetland' oats *Avena strigosa* are grown, the potatoes mainly for human consumption and the oats to provide some winter feeding for the few cattle of the small Shetland breed which are kept to provide the islanders with fresh milk. The remainder of the islands is grazed by the small hardy breed of Shetland sheep, renowned for the fine quality of its wool, which the island women hand-knit into garments, mainly to be sold.

The highest 'hill' is only about 170 feet above sea level,

and during the winter storms the whole islands are swept by the salt spray, so that flowering plants are confined to those resistant to or needing the salty soil, and in summer there is a profusion of species such as thrift, vernal squill, and moss campion, while some of the offshore holms have a carpet of scurvy grass. In the autumn there is often an abundance of excellent field mushrooms which are never eaten by the islanders, who view them with suspicion, but will buy an inferior variety in a tin from the local shop!

When I took on the responsibility of Shetland representative of the Royal Society for the Protection of Birds, I realised that, although I was a Shetlander born and bred, my knowledge of the more remote parts of Shetland was at best inadequate; so, pursuing a policy of learning as much as possible about at least one new district each season, I decided to pay as many visits to the Out Skerries as was practicable during the 1966 season.

The small amount of literature available about bird life on Out Skerries deals exclusively with the breeding species, but different writers suggested that the group might be well worth looking at with regard to migration, and it is known that regular visits were paid to Out Skerries by the late Sammy Bruce, a noted Shetland bird collector whose collection of skins, now in the new museum at Lerwick, contains such rarities as Britain's first Red-flanked Bluetail and the first Scottish Greenish Warbler and Collared Flycatcher.

Spring

Living in Shetland made it easier to time my visits to coincide with a movement of birds actually taking place, and it was not until gales and rain from east and northeast on May 8th and 9th brought the first trickle of birds to Yell that I decided the time was ripe for a visit to Skerries, as it is usually called.

I had hoped to do the 17-mile crossing from Mid Yell in my own 20-foot open boat, but the weather that brought the birds also brought stormy seas, and it would have been foolhardy to go on my own at that time, so I took advantage of the fact that the Out Skerries' only regular link with the rest of Shetland, the mail steamer *Earl of Zetland*, was due to make her weekly call on Tuesday 10th, and I was deposited, complete with tent and primus, on Bruray about midday. In spite of warnings (joking I thought) about a coming force 9 gale I set up camp in the doubtful shelter of a loose stone dyke, and already it was evident that there were many migrants on the island. Willow Warblers and Whitethroat were hunting flies along the wall, a Pied Flycatcher was making sorties from the top, while in the little field at the back a

'*flava*' and two White Wagtails were running in and out between the legs of the sheep grazing there.

After I had sorted out myself and belongings, I set out on what I intended to be a quick tour of the two main islands, telling myself I would not be sidetracked by individual birds but try to get a general picture of what birds were on the islands. However I had not gone very far along the stone dyke when I was brought up short by a bird which at first glance I took to be a Lesser Whitethroat but which, through my binoculars, proved to be a bird I had never seen before, and which I recognised as a male Subalpine Warbler in beautiful breeding plumage.

I slowly lowered myself to the wet ground and watched as the bird worked its way along the wall towards me, sometimes hopping on the ground with its tail held at an almost Wren-like angle, and occasionally fluttering up over the lower stones of the wall after some insect. It continued to approach until it was so close I could not focus my glasses on it, and until, even without them I could see the red eye and the clear white 'moustache' stripe. Finally, when no more than 5 or 6 feet from me, the bird decided I was not just part of the scenery, and promptly disappeared into a hole in the wall.

A little further on a Corncrake did the same disappearing trick into the wall, being unable to use its usual cover of grass, which at that point came barely up to its knees.

A freshly manured field next attracted my attention and among the birds I found feeding on it were Woodpigeon, a Turtle Dove, a small flock of Twites with eight Linnets and single Redpoll, Chaffinch, Brambling and Siskin, a few Reed Buntings and a single Tree Sparrow. Parties of Turnstone were everywhere, most having probably wintered, and some were already showing signs of the attractive summer plumage.

Down near the south end of Housay a stone dividing wall about 400 yards long had attracted many small birds, and walking along it, I gathered them in front of me until at the end of the wall I had some 30 or 40 mixed Willow Warbler, Chiffchaff, Whitethroat, Lesser Whitethroat, Goldcrest, Pied Flycatcher, Blackcap, Redstart and Dunnock, which then doubled back to the shelter of the wall again.

Below the bridge which joins the two islands a Sand Martin was hawking flies as I crossed back to Bruray in the evening, and on Bruray hill there were a few Fieldfare, Song Thrush, Ring Ouzel and a solitary Snow Bunting. Some parties of Twites were probably passage birds, the resident population usually spending the winter in the stackyards with

the House Sparrows, where they are assured of a plentiful food supply.

The warning about the weather which I had scoffed at became too evidently true during the night, and I got very little rest, with the tent threatening to tear out its moorings at any minute, my only consolation being in the hope that the gale would blow in more birds.

The next morning showed that little change had taken place during the night. Most of the birds on Bruray seemed to be the same ones, but the Sand Martin, which was still by the bridge, had been joined by a House Martin, and three Carrion Crows—unusual visitors to Shetland—were new. A better thrill awaited me on the rocky knoll above the island's tiny post office where a splendid Red-spotted Bluethroat was showing off his livery as he flirted from stone to stone, behaving quite differently from those I had seen in Yell and on Fair Isle, where they usually skulked in cabbage patches or the like and were very difficult to get a good look at.

At the back of the 'village' on Housay there is a little marshy patch of perhaps half an acre, and when I got there after midday a number of pipits were moving around and through it, so I sat down in the lee of a knoll from where I could get a good view and started to my lunch. A few Rock Pipits, possibly resident birds, were feeding on the drier ground round the edges, Meadow Pipits were calling and moving from place to place among the long grass, and the odd Tree Pipit identified itself by its wheezy call.

A bird got up from quite close to me which looked like a Meadow Pipit in flight but which had me grabbing for my glasses when it uttered a call I had certainly never heard before, a loud clear *tseee-ip,* quite unlike the call of any of the other pipits nearby. Lunch forgotten, I hurried to where it had dropped in the grass, but again the bird got up without my being able to see it on the ground, and again gave this strange call. I decided these tactics were not getting me anywhere and went back to my 'piece' and just waited, and I was rewarded about ten minutes later by having a Red-throated Pipit come out on the dry short grass only 30 yards away, giving me ample time to study its distinctively marked cheeks and throat, which was clear enough to enable me later to pick out the bird at over 200 yards.

It particularly pleased me to be given this opportunity of comparing the calls of four different species of pipit, and I spent some time at the marsh then and on the following day, when the birds were still there.

On my way back I called on an old lady to pass on greetings from friends in Yell, and while she regretted that she

knew nothing about birds she rather apologetically told me she had seen a 'pink Starling' a short while before, and went on to give me a description of a Rose-coloured Starling that would have no trouble getting past the Rarities Committee, had I been able to get fuller details.

The wind had dropped during the day, but the forecast was again of gales, so I gladly accepted the offer of the sail loft on the pier to set up house in, and spent a much more comfortable night with a pile of nets for a mattress.

The 12th was very wet and windy as another front passed through the Fair Isle sea area. I decided to have a look at the other island, and a young lobsterman put me off on Gruney and arranged to pick me up later in the day.

Gruney has even less shelter than the other two islands. It was obviously less attractive to small migrants, and I saw little other than some Wheatears and the odd Redstart. There was a solitary Grey Lag Goose beside a little pool and it seemed reluctant to leave the isle, perhaps a 'pricked' bird which did not feel up to the long flight to northern breeding grounds. The only other new birds were a couple of Arctic Skuas speeding past, and the first Arctic Tern to appear in the islands, although I had seen a number around Yell before I left.

Back on Bruray I found that there were quite a few birds I had not seen the day before. A fair number of Whinchats had arrived, and where I had seen the Bluethroat the day before there was now a female Black Redstart, and I later saw another—also a female—at the other end of the isle.

A visit to the manured field found several new and exciting species, and at one time I lay prone with a ♂ Reed Bunting, a ♂ Lapland Bunting, and a ♂ Ortolan Bunting in the field of view of my binoculars at about ten yards range, each in perfect summer plumage. The Lapland Bunting would stop feeding every now and then to give a burst of song. While lying there I added another bird to my life list; although it was only a humble hen Greenfinch they are quite rare in Shetland. The fact that I smelled strongly of cow manure for some time afterwards in no way detracted from my enjoyment of that afternoon.

I had arranged to get a lift back to the mainland on Friday 13th on a fishing boat and only had time for a quick dash round before we left, but it was obvious there had been a big departure during the night. Numbers of nearly all species were very much down, but passing a little cabbage yard on my way to the boat I had a tantalising glimpse of a bird which could have been a Thrush Nightingale, and I

did not have time to follow it up, with the boat waiting and the crew anxious to be off.

Summer

My next visit to Out Skerries, on 10th-11th June, was mainly to look at the breeding birds and to see what, if any, changes had taken place since Venables did a survey in 1950 (*Birds and Mammals of Shetland* 1955).

I found the situation to be very much the same, even to the small cliff-nesting colony of House Sparrows with the rather unusual nesting neighbours of Fulmar and Puffin.

Venables says that the Shetland Wren *T. t. zetlandicus* became extinct in Out Skerries about 1930 and certainly I saw no signs of any in June, although I did see a pair on my visit in October which appeared to be of the local race.

Blackbirds are another species which, although breeding all over Shetland, are absent from Out Skerries.

Oystercatchers seem to think they own the Out Skerries, and a walk round the shore can be a most exasperating business, with the incessant piping as one pair takes over where the last leaves off, making the possibility of coming on, say, a Ringed Plover leaving the nest, completely out of the question.

Still in June there was some evidence of migration, and I saw Garden Warblers, Spotted Flycatcher, White Wagtails, Heron, Swallow and House Martins.

The weather was at its Shetland best, and I had made the crossing in my own small boat in 2½ hours, and on the following day spent the forenoon going round all the little offshore holms and rocks, going ashore on most of them to count nesting birds and enjoy the sunshine and the pink and white carpet of thrift and scurvy grass. I went ashore on Bound Skerry, where I was made welcome by the lightkeeper and his assistant, who invited me to climb the 120 feet of stair to the balcony, from where I could take photographs of the panorama of islands and skerries shimmering in what was the nearest we get to a real heatwave. In the afternoon I made a leisurely trip back to Yell, calling 3 miles northwest of Skerries at Muckle Skerry, with its gulls, Fulmars, Eiders and Black Guillemots, and disturbing the grey seals at their siesta on the rocks. The sea was glassy smooth and I could hear the short *ss-ss* as a porpoise came to the surface to breathe, its round little body glistening in the sun.

On the way back I saw the great bulk of a lesser rorqual break the water half a mile away, and its back fin had almost disappeared before the snort of its expelled breath came faintly across the water.

Autumn

The last few days of August were pleasant, with sunshine and light northeast winds as an anticyclone built up over Scandinavia, and I began to see an odd Willow Warbler and Pied Flycatcher, but did not expect to see any numbers of birds until the weather broke a bit and adverse winds and bad visibility encouraged the migrants to come down on to the islands to rest. However on the evening of 30th August I had a telephone call from John Simpson, a keen and knowledgeable birdwatching friend from Whalsay, who told me that he had been given the chance of a few hours in Out Skerries that day and that among a lot of interesting birds he had seen a Treecreper and a Wryneck.

The high over Norway, although weakening, was still keeping the winds light, so early next morning I set off in my boat accompanied by a young birdwatching visitor from the south who was keen to see Out Skerries. Although there was a long swell which often hid us completely from the shore, we made good time on the trip out and arrived in Skerries to find the pier cluttered with strange equipment, as a group of London treasure hunters prepared to go out to the site of a wreck near the south tip of Housay, where they hoped, with the aid of skin-diving equipment, to recover some of the fortune in coin reputed to be on board the ship which had been wrecked there about 1700.

Our 'treasure' was more likely to fly off the islands, so we wasted little time in setting out to see what we could find. Almost the first thing we saw was a Bluethroat scolding from a wall. As we came closer it was joined by another, and we could see that the cause of their displeasure was a cat which was obviously considering the nutritional—rather than the rarity—value of Red-spotted Bluethroat. We later decided there were certainly five, possibly more, Bluethroats on the island, all in varying stages of moult, usually showing only a faint crescent of blue and mostly lacking the red spot.

Again I was struck by the ease with which we could watch these usually very shy birds, although on this occasion there was a lot of cover available in the potato and oat fields and in the vegetable and cabbage yards.

We spent a long time looking for the Treecreeper, but never found it, and came to the conclusion it had either moved on or been taken by a cat. The Wryneck—a new bird for me—was still where Johnnie Simpson had found it, and we saw a second one pecking about in its slow sedate manner among some House Sparrows in a stack yard, so tame that I was able to poke my camera over the wall and take photographs from only about twelve feet away.

A party of ten Herons was flying around, and was rather ridiculously upset when a hen Merlin impudently stooped past them. A nice flock of 300-400 Golden Plovers was moving about, many of them—or they may have been young birds—already in winter plumage, but many still with traces of summer dress dark enough to suggest they were of a more northerly origin.

Very few Oystercatchers were left on the islands, but we saw a single Ruff and a Dunlin, and there were many parties of Turnstones along the shore or up on the fields.

Of the small passerine migrants Wheatear, Whinchat, and Willow Warbler/Chiffchaff were most numerous, with probably a hundred of each on the islands; next were Garden Warbler with an estimated 50, and there were smaller numbers of Redstart, Blackcap, Whitethroat, 20+ Pied Flycatchers, and single Lesser Whitethroat, Crossbill, Ortolan, and '*flava*' Wagtail, and as we returned to the boat in the evening two Fieldfares came in from the northeast and carried on towards the Shetland Mainland, chacking to each other as they flew.

Next day, 1st September, the weather was showing signs of breaking up, and in any case it was apparent that many birds had left during the night. On a quick tour round the best areas we found one Bluethroat, one Wryneck and much reduced numbers of the other birds. We left for Yell on a swell that was occasionally showing a white crest in the rising wind.

Although we had seen a couple of Fieldfares on this trip, the large movements of turdidae had not yet started, and I decided to make one more visit when this got under way. It was not until 29th September, when I went up the hill at West Yell to show a visitor a fine male Snowy Owl which had used the same roost for a couple of weeks, that I found quite a few small parties of Redwing on the hills, and decided I would try to get into Out Skerries for my last visit of the season.

The weather had been unsettled for a time and it was too rough to make the journey in my own boat, but I was lucky enough to get a lift on a fishing boat, and we arrived as darkness fell on the last day of September.

The following morning was dull and rainy with a strong northeast wind, and even before it got light I could hear calls of Redwing and Fieldfare as they passed overhead. My forenoon tour showed that there were indeed large mixed flocks on the islands and a rough estimate gave a figure of well over a thousand. Probably half of this was made up of Redwings, with Song Thrush next and smaller numbers

of Fieldfare, Blackbird and Ring Ouzel. Several times in the past I had listened to thrushes going over in the dark and had been puzzled by a call heard only once or twice, a chortling call something like the flight call of a Skylark, but louder and more bubbly, and I was pleased when I heard this again in daylight and was able to see that a Ring Ouzel was responsible.

All day there was a continual movement of birds on the 600-odd acres, flocks of thrushes were seen to leave in the direction of Shetland, and others were seen arriving from the direction of Scandinavia. A flock of about 50 Wigeon came in from the northeast, flying at a tremendous speed before the rising wind, and after a moment of indecision sped on towards Whalsay. A little group of dark specks low on the waves resolved into a party of Siskins which fell to feeding on the faded thistle heads with much twittering, and a small flock of Snow Buntings settled up on the hill, followed by a lone Lapland Bunting.

There were many other birds already on the islands: Wheatear, Redstart, Robin, Blackcap, Garden Warbler, Whitethroat, Goldcrest, Pied Flycatcher and Dunnock, and on the stubble a flock of over 150 Bramblings and a few Chaffinches.

It rained most of the night and the wind veered to south-east, and almost the first thing I saw in the morning was a very tired-looking ♂ Kestrel sitting hunched up in the shelter of a rock, ignoring the scolding of a pair of Rock Pipits. As I made my way along the narrow road a wisp of three Jack Snipe got up and flew a short distance before dropping silently into some long grass.

Thrush numbers appeared to be about the same except that there were a few more Ring Ouzels. The Bramblings were still on the stubble, the Snow Bunting flock had about doubled and had five or six Lapland Buntings with it now. There had obviously been an arrival of Goldcrests; they were creeping mouse-like along walls and up docken stems, all the while keeping in touch with their penetrating *psst psst*.

Two Red-breasted Mergansers were resting on the west voe, and another pair came flying from the east but, like the Wigeon of the day before, carried on past.

As I made my way back to my home on the fishing boat, just as it was getting dark, I heard an excitement of Goldcrest calls from the side of the road, and from only a couple of feet away watched six of these tiny creatures jostling for position on a short bit of dock stem which was sticking horizontally through a tuft of grass. Later on at night, on my way back from visiting some of the islanders, I shone my torch briefly on the six—now pressed tightly together and

looking like little headless green balls.

The wind veered round to the north and all next day blew a severe storm. Huge seas pounded the coast with an incessant roaring, and the whole islands were wet with driven spray. Not a day to do much birding, but I dressed in oilskins and had a walk round, and all over the island were thrushes sheltering under whatever cover they could find. It would have been a shame to have flushed the small birds from the cabbage patches and walls.

A large number of Turnstone had blown in; I saw one flock of over 50 and a number of smaller parties. A Great Skua flew past, causing momentary anxiety among the pier Herring Gulls. A party of Twites was flying about on the lee side of the hill and one looked a little larger than the others in flight. I had difficulty in getting a look at the bird on the ground, and when I did finally get a few seconds view I did not know what it was. I could only see the head and neck and noted the stubby finch bill and the greyish-brown, faintly streaked head with a prominent dark eye; it was not until next day when I was in Fair Isle and Roy Dennis showed me a ♀ Scarlet Grosbeak, that I was pretty certain that this was the same bird I had been puzzled by on Out Skerries. I was not able to convince the Rarities Committee.

The storm abated sufficiently for us to get off the next day, and I caught the boat for Fair Isle with only five minutes to spare.

Conclusion

The possibilities of Out Skerries as a regular migration observation station cannot be reliably assessed upon such short acquaintance, and there is no one at present living on the islands who has the interest or knowledge of birds to make regular observations. Certainly it could never compete with Fair Isle in this respect, but it is a fascinating place to visit, and for the individual observer there is the attraction of the small area and very limited cover which makes it possible to see practically every bird that lands on the islands, added to this the fact that Out Skerries lie further east, and therefore nearer the Scandinavian peninsula, than anywhere else in Shetland, which could mean—and my limited observations would seem to support this—that Out Skerries must be the first landfall for some of the birds crossing the North Sea from Scandinavia and the continent.

Summary

The Out Skerries, 10 miles east of the Shetland Mainland, are described, particularly in relation to observing bird migration there. An account is given of short visits, totalling 8 days, in spring, summer and autumn 1966, together with a systematic list of the birds noted each day.

Birds at Out Skerries in 1966

	May 10	May 11	May 12	Jun 10	Aug 31	Oct 1	Oct 2	Oct 3	
Storm Petrel				/					breeds—small numbers
Fulmar	/	/	/	/	/	/	/	/	breeds—common
Gannet	/	/	/	/	/				feeding offshore
Cormorant					10				bred late 1880s (Venables)
Shag	/	/	/	/	/	/	/	/	breeds—common
Heron	1	1	1	1	10	2	2	2	
Mallard							1		
Wigeon						50			
Eider	/	/	/	/	/	/	/	/	breeds—?100 prs; max. fl. 50 on 11 May
Red-breasted Merganser							4		
Grey Lag Goose			1						
Merlin					1				
Kestrel							1		
Corncrake	1								
Oystercatcher	/	/	/	/	6				breeds—common
Lapwing	/	/	/	/	/	/	10	/	2-3 prs breed—?passage 2 Oct
Ringed Plover	/	/	/	/	/	/	/	/	breeds—?20 prs; fewer prob. winter
Grey Plover						/			
Golden Plover				1	300	250	250	250	
Turnstone	250	250	250		20	90	90	300	
Snipe							2	2	
Jack Snipe							5	2	
Curlew				1		10	10	10	
Redshank	6	6	6		4	20	30	18	does not breed

	May 10	May 11	May 12	Jun 10	Aug 31	Oct 1	Oct 2	Oct 3	
Knot							1	2	
Dunlin				1	1			1	
Ruff					1				
Great Skua		1	1	2				1	
Arctic Skua		2	2	2					
Great Black-backed Gull	/	/	/	/	/	/	/	/	breeds—common; winters
Lesser Black-backed Gull	/	/	/	/	/				breeds—?50 prs
Herring Gull	/	/	/	/	/	/	/	/	breeds—common; winters
Common Gull	/	/	/	/	/	/	/	/	breeds—c. 20 prs
Kittiwake	/	/	/	/	/	/	/	/	breeds—small colonies
Common/Arctic Terns			1	/	1C				breed—?1000 prs, mostly Arctic
Razorbill	/	/	/	/	/				breeds—small colonies
Guillemot	/	/	/	/	/				breeds—small colonies
Black Guillemot	/	/	/	/	/	/	/	/	breeds—common
Puffin	/	/	/	/	1				breeds
Rock Dove	/	/	/	/	/	/	/	/	breeds—c. 15 prs
Woodpigeon	1	1	2						
Turtle Dove	1	1	1						
Wryneck					2				first seen 30th
Skylark			3	1		10	12	6	may have bred in past (Venables)
Swallow			6	1					breeds occasionally (Venables)
House Martin		1		8			1		
Sand Martin	1	1							
Raven	5	5	5	1	2				pr (3 flying young) evidently bred
Carrion Crow		3	3				1		
Hooded Crow	/	/	/	/	/	/	/	/	breeds—2-3 prs

	May 10	May 11	May 12	Jun 10	Aug 31	Oct 1	Oct 2	Oct 3	
Wren						2			breeding ceased c. 1930 (Venables)
Fieldfare	2	1			2	180	250	300	
Song Thrush	2	1				200	200	50	
Redwing						600	600	600	
Ring Ouzel	1					30	38	12	
Blackbird						25	15	6	
Wheatear	200	200	200	100	100	6	2	4	breeds—?50 prs
Whinchat			10		100		8	4	
Redstart	2	2	6		8	15	20	20	
Black Redstart			2						
Bluethroat		1			5				
Robin						1	2		
Blackcap	4	4	6		6	10	12	1	
Garden Warbler				4	50	6	4		
Whitethroat	20	15	12		3	1			
Lesser Whitethroat	12	12	10		1				
Subalpine Warbler	1	1							
Willow Warbler/Chiffchaff	10	40	30		100		4	1	
Goldcrest	1					2	30	20	
Spotted Flycatcher				1	2	1			
Pied Flycatcher	1	1	1		20	1			
Dunnock	1		1			1			
Meadow Pipit	50	50	50		30	10	6	6	does not breed
Tree Pipit		2	4			2			
Red-throated Pipit		1	1						
Rock Pipit	/	/	/	/	/	/	/	/	breeds—20-40 prs

	May 10	May 11	May 12	Jun 10	Aug 31	Oct 1	Oct 2	Oct 3	
White Wagtail	6	8	8	2					
'Yellow' Wagtail	2				1				
Starling	/	/	/	/	/	/	/	/	breeds—few, ?12 prs
Greenfinch			1						
Siskin	1	1	1			4	20	20	
Linnet	8	28							
Twite	200	200	200	100	200	175	175	175	breeds—common; figures are biggest flocks
Redpoll	1								
[Scarlet Grosbeak]								1	possible only
Crossbill					1				
Chaffinch	1	6				6	8	6	
Brambling	1	1				150	150	100	
Ortolan Bunting			1		1				
Reed Bunting	6	4	1			2			
Lapland Bunting			1			2	6	1	
Snow Bunting	1					50	100	25	
House Sparrow	/	/	/	/	/	/	/	/	breeds—?100 prs
Tree Sparrow	1	1	2						

/ — present but not counted

Orkney Cormorants—their breeding distribution and dispersal

E. BALFOUR, A. ANDERSON and G. M. DUNNET

Introduction

Information on the breeding status of the Cormorant *Phalacrocorax carbo* in Orkney in former times is scanty and rather vague. Buckley and Harvie-Brown (1891) say: "The Cormorant, though by no means an uncommon bird, is still far from numerous, and seems to prefer the west side of the islands to the east." In context, this statement seems to refer to breeding birds. The authors give no indication of the size of the colonies they saw over 80 years ago, but say that there was an interesting Cormorant colony on Seal Skerry off North Ronaldsay (numbering 50 nests with eggs in July 1892 according to Briggs 1893); that many were nesting at Rothiesholm at the south of Stronsay; that there was a colony on a small stack near Costa Head (called the Standard); and that nesting also took place on the Calf of Eday, Rousay and Hoy. They also state that Salmon found Cormorants breeding on Copinsay in 1831, but that Irvine-Fortescue saw none there in 1884 (a local boatman recently reported that they began breeding there again in the late 1930s). This list of breeding places rather conflicts with the theory of a western distribution.

The present distribution of breeding colonies could be described as central and eastern (fig. 1), with none on the western side of Orkney. The three largest colonies are in the central area of the North Isles and there are four smaller ones strung out along the eastern seaboard, from Little Pentland Skerry in the extreme south to Seal Skerry, North Ronaldsay, some 53 miles away, in the extreme north.

Since Buckley and Harvie-Brown's time, Cormorants have ceased to breed at the Standard, Rousay and Rothiesholm, and new colonies have become established at Little Pentland Skerry, Horse of Copinsay, the Brough of Stronsay, Muckle Green Holm, Holm of Boray and Taing Skerry.

The present Orkney Cormorant colonies are on very small islands, with the exception of the Calf of Eday (600 acres) and Muckle Green Holm (about 100 acres); they are all uninhabited. Little Skerry and Seal Skerry are low, bare, rocky skerries which are storm-washed in winter. The Horse of Copinsay and the Brough of Stronsay are small stack-type islets. The Horse lies about three-quarters of a mile north of Copinsay and the Brough is separated from the main cliffs

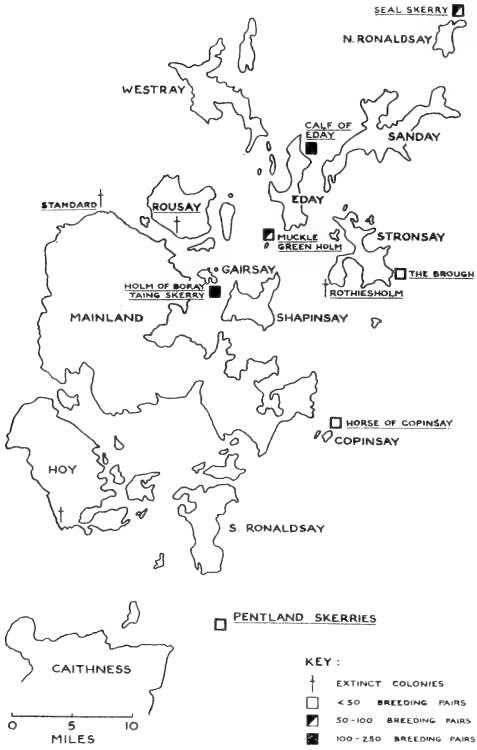

FIG. 1. Distribution of Cormorant colonies in Orkney.

near Burgh Head, Stronsay, by a narrow channel only a few yards across. Taing Skerry is a very small stone-shingle islet on a shallow reef, and Holm of Boray a small, narrow and elongated island only a few feet above sea level. Both lie in a comparatively sheltered area between Shapinsay and Gairsay; they are about three-quarters of a mile apart and constitute a single colony.

We can do little more than speculate on when most of the new colonies came into being during the past 80 years. There seems to be no precise knowledge of how long before the 1960s Little Skerry and the Horse of Copinsay were occupied. The Stronsay colony has been in existence for many years and the Muckle Green Holm colony since 1935, but for how long before that we do not know. Nor do we know exactly how and when the most recently established colony of Holm of Boray/Taing Skerry began; there is no record of Cormorants nesting on the Holm of Boray before the late 1950s.

Nesting habitat

Orkney Cormorants use four different types of nesting habitat: bare, rocky and exposed skerries (Little Skerry and Seal Skerry); shingle or stony beach (Taing Skerry); low, flat, grassy sward (Holm of Boray); and flat cliff-tops (the remaining colonies). All habitats are near to the edge of either the water or the cliff. At the Calf of Eday and the Brough of Stronsay the cliffs exceed 100 ft in height; the Horse of Copinsay is much lower, and the Muckle Green Holm nesting cliffs are not more than 40 ft high.

Nests

The nests are usually closely grouped together, often only a foot or two apart. They vary considerably in bulk. Some may be built only a few inches above the ground, but about a foot is more usual. All nests, except those on the Calf of Eday (which are built of heather), are composed of *Laminaria* and other seaweeds, with occasionally pieces of flotsam and jetsam, such as creel ropes, bits of wood and skeletal remains of birds and animals.

The breeding season

We have usually visited colonies only in late June or early July for the purpose of ringing the young and have taken no special note of the duration of the breeding season, but there is evidence of a considerable spread in egg laying. At the end of June a number of the young are fully grown, but there are also some still too small for ringing (some are very small), and there are always nests containing eggs, some apparently newly laid. For example, on Muckle Green Holm on 20th July 1961 there were 82 nests, of which 41 had eggs, 2 had small chicks, and 39 had large young, the majority of which could fly.

It has been noted that at the Holm of Boray/Taing Skerry colony, the birds at the smaller group of nests, on whichever island, tend to breed later. For example, on 22nd June 1960, when 98 large young were ringed at Taing Skerry, the 54 nests on Holm of Boray contained only 12 tiny, unringable chicks and 147 eggs. On 5th July 1961 the situation was much the same: 91 large young were ringed on Taing Skerry, but there were only small newly hatched chicks and eggs on Holm of Boray. In 1963 and 1964, however, Holm of Boray had a big group of nests and Taing Skerry a small, later one. On 23rd June 1963 and on 25th June 1964 there were only newly hatched young and eggs on Taing Skerry, but a preponderance of large, ringable young on Holm of Boray.

Constancy of breeding sites

Cormorant breeding colonies have been known to remain in the same place for a very long time. The Seal Skerry and Calf of Eday colonies, for example, have been in existence at least 80 years. Colonies do occasionally die out, as happened at the Standard, Rousay, Rothiesholm and Hoy. Perhaps human interference or persecution caused desertion there.

Since the beginning of casual observations in 1956 it has become evident that from year to year there has always been a shift of at least part of the colony to new ground. Such shifts may entail a movement of only a few yards. A colony is sometimes split into two groups when the birds move out in two different directions from the nesting ground of the previous year, as on the cliff-tops of the Calf of Eday or Muckle Green Holm, but is likely to come together again in some subsequent breeding season; after a year or two, abandoned ground may be used again. On a very small island any shift must necessarily be limited, but at the Calf of Eday, where there is a long stretch of suitable cliff-top, the birds restrict themselves to a certain section of it. Local movements within the colony area have been plainly seen on the twin islands of Holm of Boray and Taing Skerry. Table 1 reveals that since 1960 the main bulk of the colony has occupied Taing Skerry three times and Holm of Boray four times. This has not been strictly alternate, however. Each island has been tenanted by the greater part of the colony in consecutive seasons, but in each year, 1965 excepted, there was a local movement of some of the birds to different ground.

Numbers

In recent years the Orkney Cormorant population has fluctuated fairly closely around 600 breeding pairs. The census unit was the nest containing eggs or chicks, and all counts were made during the last week in June or very early in July, by which time it was reckoned that nest building would have ceased. Taing Skerry was censused from a boat in 1964, 1965 and 1966. All the other counts were obtained whilst walking through, or near to, the colonies. The two largest colonies are at the Calf of Eday and at Holm of Boray/Taing Skerry, each consisting of about 200 breeding pairs. Table 1 gives the number of nests on these three islands in all years for which we have counts since 1956. Censuses of the other five colonies have been made infrequently and are fragmentary. The estimate of more than 40 nests at Seal Skerry in 1964 was made by local fishermen, and we are indebted to K. G. Walker for making the count there

Table 1. Nest censuses of the two largest Cormorant colonies in Orkney (Holm of Boray and Taing Skerry are regarded as a single colony)

	Holm of Boray	Taing Skerry	Calf of Eday
1956	no count	no count	220
1959	180	no count	no count
1960	54	166	no count
1961	17	190	198
1962	21	185	168
1963	188	43	182
1964	202	15	198
1965	208	0	170
1966	172	c.35	no count

in 1965. Only one proper count was made at Muckle Green Holm, in 1961, but regular estimates, from a neighbouring cliff-top, were made at the Brough of Stronsay between 1959 and 1963. The two other colonies were estimated from a distance.

Table 2. Counts and estimates of nests at the five smaller Cormorant colonies in Orkney

Seal Skerry	35-40	Estimate 1963
	over 40	Estimate 1964
	50	Count 1965
Muckle Green Holm	82	Count 1961
Brough of Stronsay	c.20	Estimates 1959-63
Horse of Copinsay	20-30	Estimate 1962
Little Skerry	20	Estimate 1962

Ringing

The annual ringing of Orkney Cormorant chicks, jointly carried out by the Orkney Field Club and Aberdeen University, began in July 1959. The Cormorant colonies had previously attracted little serious attention. Because of the accessibility of several of them and the high rate of recovery for the species, we considered that the ringing of chicks might yield useful data on patterns of dispersal in a comparatively short time. No adults have been ringed.

Most of the ringing was done by members of the Field Club, as early as 14th June and at late as 20th July, depending upon the stage of development of the chicks. Up to and including the 1966 breeding season 1023 nestlings were ringed on the four islands Holm of Boray, Taing Skerry, Calf of Eday and Muckle Green Holm. The numbers ringed annually at each place are shown in table 3.

Table 3. Cormorant nestlings ringed in Orkney 1959-66 by Orkney Field Club and University of Aberdeen

	Holm of Boray	Taing Skerry	Calf of Eday	Muckle Green Holm	Annual totals
1959	56				56
1960		98			98
1961		90		15	105
1962		77	50		127
1963	64		40		104
1964	86		50		136
1965	110		87		197
1966	200				200
	516	265	227	15	1023

Recoveries of Cormorant chicks ringed in Orkney

The only recoveries of Orkney-ringed Cormorants are of birds ringed as pulli under the Orkney Field Club and Aberdeen University ringing programme. In the seven years to 30th September 1966 we have had 142 recoveries (excluding birds ringed in 1966), giving a recovery rate of 17.3%; though there may be some further recoveries to come from this group this is markedly less than the national rate of 23.0% for all Cormorant recoveries (2041 out of 8873 ringed up to 31st December 1965). Our recoveries are grouped in figs. 2, 3 and 4 according to age and whether the birds were found in winter (October-March) or summer (April-September). This division of the year is somewhat arbitrary, but it is a useful grouping employed by Coulson (1961) and used again here in the interest of uniformity.

Dispersal in the summer of hatching

Without conspicuous colour-markers it is difficult to detect precisely when the young Cormorants begin to move away from their natal shores; and unless some indication of the time of death is given by the finder, by reference to the state of decomposition of the body, for example, the recoveries tend to be biased as a measure of the date of dispersal, since it may be some time before the body is found. On the basis of the dates of recovery of ringed birds it seems that young Cormorants arrive on the mainland of Scotland from the last week of August onwards (fig. 2). Observations made by the late Miss E. A. Garden at the Ythan estuary, Aberdeenshire, from 1954 to 1962 indicate that although Cormorants may be seen there in each month of the year they begin to be observed more frequently in September, and there is a decline in frequency from February to June. The proportion of Orkney birds at the Ythan is not known.

FIG. 2. Cormorants ringed in Orkney and recovered by 30th September in the year of hatching; figures against Scottish mainland recoveries show the number of weeks between ringing and recovery.

Three Orkney-ringed Cormorants reached the Firth of Forth by the third week of September.

Their late-summer dispersal from the breeding grounds is clearly southerly, favouring the eastern coastal waters of the Scottish mainland, all but one of the 18 mainland recoveries (the figure includes 5 birds ringed in 1966) having been in the eastern half of the country and none on inland waters. The single exception to the southeasterly distribution is a bird, not included in fig. 2, which was shot near Ulverston, Lancashire, on 11th September 1966, only 10 weeks after ringing. Its presence on the west of England should be considered in conjunction with winter recoveries of birds in their first year of life discussed below. Of the seven remaining summer-of-hatching recoveries, all in Orkney, three were found about 14 miles north to northeast from their place of ringing by the last week of August, one 17 miles southwest by mid September, and three locally, up to the third week of September. Six of the seven summer-of-hatching recoveries in

Orkney were of birds that had been dead for an unknown period, but 71% of the birds recovered on the Scottish mainland are known to have been freshly dead.

Later recoveries in the first year of life

Both immature and adult Cormorants are observed in Orkney waters during winter, and Orkney recoveries in that season are of birds ringed locally (figs. 3 and 4). The proportion of immatures and adults which disperse each year is unknown, but the ratio of distant to local recoveries of first-year birds (6.7 : 1) and of older birds (8.0 : 1) indicates that the proportion dispersing some distance is high. To maintain the breeding stock a substantial return to Orkney of emigrant birds (or immigrants from elsewhere) must therefore be required each year. It cannot be assumed that birds recovered in Orkney in their first or later summers did in fact take part in distant dispersive, and subsequent return, movements. Nor can it be established for certain that all emigrant Cormorants that are fit to undertake the return journey to Orkney do return at the conclusion of an overwintering period in mainland Britain or elsewhere. One-third of the recoveries outside Orkney, of both first-year and older birds, were made in the summer period. Half (13) of those first-year recoveries occurred in April, eight in May, three in June (two of them were fresh) and two in July. This shows that at least some first-year birds remain away from Orkney until well into summer. Three of the four Cormorants recovered in summer in mainland Britain after the first year of life were found in or before the last week of April, probably just before the onset of the breeding season.

Cormorants ringed at southern colonies such as Mochrum and the Farne Islands have been shown to have northerly vectors in their dispersal patterns (Coulson 1961; Mills 1965) but no ringed birds from those breeding stations have yet been found in Orkney. Only two first-year Cormorants have been shown to travel more than 20 miles north of their natal colony in Orkney. Three which were recovered in winter in Orkney more than 10 miles from the place of hatching had a northerly component in their dispersal pattern. Only one of the eight summer recoveries in Orkney was north of the place of hatching (15 miles).

The pattern of recoveries of first-year birds dispersing south from Orkney (fig. 3) emphasises the tendency to spread down the east coast of the Scottish mainland, already shown for young birds in their first August and September; the largest concentration of recoveries is in the Montrose area, and the most distant is an oiled bird found in Yorkshire five months after ringing. Only one third as many re-

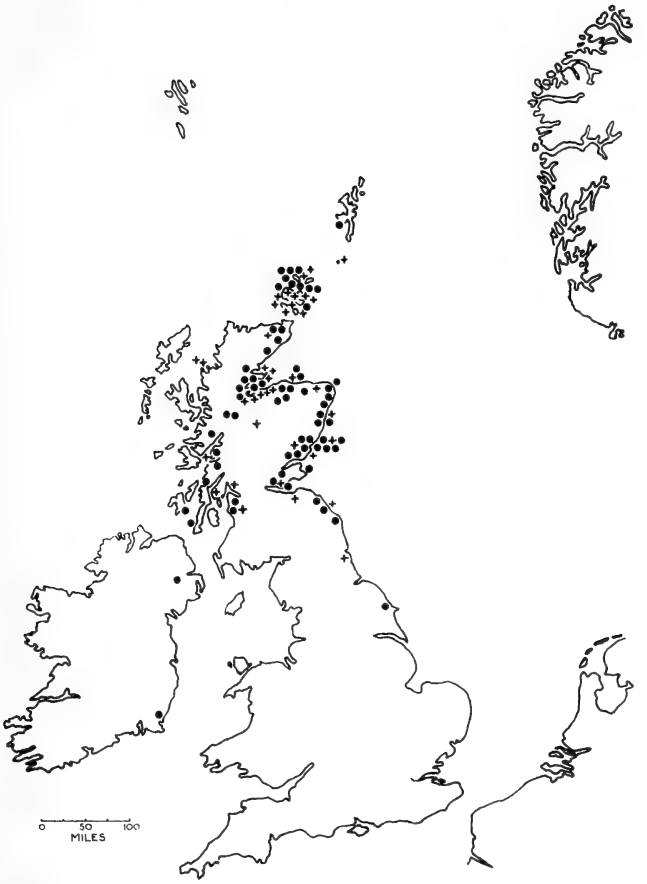

FIG. 3. Cormorants ringed in Orkney and recovered after 30th September in the first year of life; filled circles indicate winter recoveries (October-March); crosses indicate summer recoveries (April-September).

coveries are from the west coast of Scotland as from the east, and the pattern of these recoveries suggests that some of the birds moving down the east coasts of Caithness, Sutherland and Ross-shire, in a generally southwest direction, may continue straight down the Great Glen and over to the west coast. From there the sheltered seaways of the Sound of Jura and the Firth of Clyde give access to eastern Ireland, where the most distant recovery of a first-winter Cormorant (485 miles) was made in County Wexford.

It is noteworthy that only two Cormorants have been recovered on the considerable stretch of coastline of the north

and west of Scotland in Sutherland, Ross, Inverness and the north of Argyll. The sparseness of human population in that region is unlikely to be entirely responsible for the lack of recoveries there, particularly since much of that part of Scotland is well patronised by tourists in summer, but it has been pointed out that the recovery rate of Orkney Cormorants is lower than the national average, and it could be that many rings remain unrecovered on inaccessible or unvisited parts of that coastline.

Although emphasis has been placed on the coastal distribution of the present recoveries and the possibility of regular routes being followed, especially to the west, inland recoveries (over a mile from tidal water) have been made and are included in figs. 3 and 4. Assuming equal probability of recovery for inland and coastal birds, an analysis of the figures between coastal and inland recoveries (omitting Orkney, Shetland and Fair Isle) reveals that Orkney Cormorants do have a strong preference for coastal waters; in winter 50 out of 64 (78%) were recovered at the coast. Of the remaining 22%, the average distance inland was 7.5 miles, one individual being 30 miles from the sea. Of those found in summer, 42 out of 47 (89%) were coastal birds, and the others averaged 12.6 miles inland (maximum 27 miles). From observations, ringing data and published records, Mills (1965) concluded that Cormorants are widely distributed inland in Scotland, and that they "frequently occur as much as 40 miles inland, particularly during winter and early spring."

Recoveries after the first year of life

Although the number of recoveries is much smaller the dispersal pattern of Orkney Cormorants after the first year of life and the distances they cover are remarkably similar to those of the younger birds (fig. 4). The recovery of a third-winter bird over 400 miles away, near Kristiansund, is, however, the only record of an Orkney Cormorant in continental Europe.

In comparing the movements of first-year and older ringed Cormorants from the Farne Islands, Coulson (1961) was able to show that movements in the first winter are greater than those which take place in subsequent winters. Only 18 recoveries of older birds are available for the present analysis of Orkney records—12 birds in the second year of life, four in the third year and two in the fourth year. More time therefore is required before such comparisons can be made for Orkney Cormorants.

Cause of death

For the purpose of analysing cause of death, 64% of our

FIG. 4. Cormorants ringed in Orkney and recovered after the first year of life; filled circles indicate winter recoveries (October-March); crosses indicate summer recoveries (April-September); arrow draws attention to a recovery near Kristiansund.

recoveries had to be disregarded because of lack of information, most of these birds having been reported as "found dead." It is evident (table 4) that shooting constitutes the major hazard of the four categories for which we have data. This takes place from September through to March, which agrees with the dates given by Mills (1965) for the shooting of Cormorants inland in Scotland. The shooting of Orkney Cormorants in mainland Britain (21 recoveries on the east, 5 on the west) seems to take place mainly on firths, estuaries and inland waters where human interest in fisheries may be involved. Only one bird was recorded as shot in Orkney.

Salmon nets are a frequent cause of death to Cormorants, but recoveries got in this way are restricted to the salmon netting season from February to September. Most are likely to be taken in fly nets and bag nets, as they are generally reported as having been drowned. Fourteen were taken in this way in the coastal waters of east Scotland, one in the west and none in Orkney. The single Scandinavian recovery was "drowned in a fishing net at 20 yards depth." Death due to oiling took place irrespective of season, but only five birds were affected, four of them on the east coast. The only record of predation other than by man, was one of a freshly killed Cormorant at a fox's den in Caithness.

Table 4. Cause of death of ringed Orkney Cormorants

	Fishing net	Shot	Oiled	Other causes
Summer of hatching	6	4	1	
First winter	3	19	2	Head in fork of tree (1), Gale (1)
First summer	6		2	Fox kill (1)
After first year of life (winter)	1	4		Gale (1)
After first year of life (summer)		1		
	16	28	5	4
	30.2%	52.8%	9.4%	7.5%

Acknowledgments

Our grateful thanks are due to all those members of the Orkney Field Club whose labours made the study possible. We are indebted also to the British Trust for Ornithology for providing data on ringing and recoveries and for other help from its staff.

Summary

Data on the past status of the Cormorant in Orkney are scanty, but about 600 pairs now breed at two main and five smaller colonies, mostly on very small islands. Counts and details of changes are given, and notes on nesting and the breeding season. Part of a colony tends to shift to nearby ground each year.

Over 1000 chicks have been ringed since 1959. Dispersal is mainly southward and young birds reach the Scottish mainland from late August and are recorded on the north coast of Caithness and down the east coast as far south as the Firth of Forth by late September, with a single west coast recovery from Lancashire. A substantial part of the Orkney population moves away in winter, mainly to the east coast of Scotland. Smaller numbers on the west coast may have crossed the country down the Great Glen. Some year-old birds are still away from Orkney well into

summer. A third-winter bird was found in Norway.

The main reported cause of death was shooting, followed by drowning in salmon nets, but 64% of recoveries were of birds "found dead."

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The "Carrick" gull and others—Iceland or albino?

ANDREW T. MACMILLAN

(Plate 48)

Identification of the white gull which has spent recent winters in the vicinity of the *Carrick,* moored on the Clyde in central Glasgow, has stimulated such argument that it may be worth putting the story on record.

This bird took up residence on the *Carrick* in 1964 and had been there for at least a week when M. J. Everett saw it on 18th February (see also *Scot. Birds* 3: 89); it was last seen on 24th April (C. V. Chilcott). The following winter it had returned by 28th November 1964 (*Scot. Birds* 3: 265) and remained until at least 22nd April 1965 (*Scot. Birds* 3: 371). In the autumn it was back by mid August, and W. K. Richmond published a photograph of it in the *Scotsman* on 20th August 1965; it was last seen that winter on 16th May 1966 (C. V. Chilcott). By 11th August 1966 it was back again (D. J. Norden), and it was there until 22nd April 1967, leaving at a time when the Herring Gulls around the ship dropped from a dozen birds most days to just one or two (R. W. Forrester). During these four winters the bird has remained fairly regularly in the vicinity of the *Carrick,* although absent from time to time. Recently it has tended to arrive by mid August, and it leaves in late April or May. Only one bird is involved, as it favours the same perches on the ship each winter. W. M. M. Eddie reports that it roosts elsewhere, arriving in the morning and leaving in the evening.

The natural first reaction was to identify it as an Iceland Gull, because it seemed too slight and its bill too slender for a Glaucous. It was pure white all over, and similar in size

to a Herring Gull, or perhaps a shade smaller; there were no dark marks on the head; the wingtips projected at least an inch beyond the tail when it stood on the wall of the quay; in flight some observers maintained that it had a buoyant long-winged look, while others denied this, saying that it looked no more buoyant or long-winged than white wingtips would make a Herring Gull look; there was argument too whether the bill was much the same as a Herring Gull's (British race 48-55 mm, against Iceland Gull's 39-50 mm) or about a quarter smaller and less deep and hooked. At rest the bird seemed identical in general shape to the Herring Gulls with which it associated, and the colours of the bill, legs and eyes were the same as those of an adult Herring Gull. L. A. Urquhart saw a Herring Gull display to it and mount, though it did not copulate (*Scot. Birds* 3: 371). M. J. Everett watched it join in a mewing session with a Herring Gull that pitched beside it, and there was no difference in posture or voice. Iceland Gulls are said to be shriller.

Several observers with experience of Iceland Gulls felt that this bird or its photograph just did not look right for an Iceland Gull. Two features also cast doubts on the bird being an Iceland Gull—the very early return to Glasgow in mid August, suggesting that the bird had never left Scottish waters, and the fact that, though it had a strong tendency to return year after year to the same place, it apparently was already in adult plumage when first seen, unlike the great majority of Iceland Gulls recorded in Scotland. Observers were agreed that it was white all over—the total whiteness in flight being specially mentioned—whereas the pale grey mantle of an Iceland Gull should contrast noticeably with the white primaries. Supporters of the Iceland Gull theory countered by pointing out that white-mantled Iceland Gulls do in fact occur. The rarity of these, however, would suggest that for the only Iceland Gull in Glasgow to be one of them, and to turn up at a very early date, and to be an adult, was a remote combination of chances, compared with the possibility that the large local population of Herring Gulls should include an occasional albino.

It was suggested also that a brick-red orbital ring pointed to the bird being an Iceland Gull; but, apart from argument about this feature and the difficulty of being absolutely sure of it in the field, one doubts if the range of variation in the Herring Gull has been fully investigated, and the eye colour of an albino might well be unusual. Likewise, B. L. Sage says that it is not unusual for albinos to be a little smaller than normal birds.

At this point W. M. M. Eddie sent us some excellent

PLATE 48. The *'Carrick'* gull and a Herring Gull (see p. 493).

Photograph by W. M. M. Eddie

PLATE 49. Out Skerries (see p. 467).

Photograph by R. J. Tulloch

PLATE 50. Out Skerries.

Photograph by R. J. Tulloch

PLATE 51a. Wryneck, Out Skerries, 31st August 1966 (see p. 467).
Photograph by R. J. Tulloch

PLATE 51b. White-rumped Sandpiper, Stornoway, 25th November 1966 (see p. 506).
Photograph by R. MacIntyre

photographs showing the *"Carrick"* gull by itself and with a Herring Gull (plate 48). We decided to try to settle the matter once and for all, and despatched the photographs and file of conflicting correspondence to various people with extensive experience of Iceland Gulls. All of them made useful comments on the problem and none would go further towards the Iceland Gull theory than to say that it was possible; several of them said emphatically that it was not.

G. T. Kay would have liked to see the bird itself before expressing a definite opinion but saw nothing in the photographs to rule out albino Herring Gull. All the Iceland Gulls he had seen were narrower across the shoulders than Herring Gulls and had noticeably smaller bills. As an aid to identification he commented that in his experience Iceland Gulls always fed on small items—often at sewer outlets with Common and Black-headed Gulls—and never on rubbish tips with the big gulls.

R. H. Dennis identified the bird in the photographs as an albino Herring Gull before reading anything about it. The mantle was too white for Iceland, which should show also a few darker markings on the head in winter. The shape was too heavy and short—typically Herring. The wings and tail did not give it a slim enough shape. The bill was too heavy (Iceland is slenderer) and the forehead was too sloping (Iceland tends to have a rounder head with the eye appearing nearer the centre of the head—rather like a Common Gull). In fact the appearance of the bird was wrong. Putting it unscientifically, the bird had the arrogant and cunning look of a Herring Gull in its eye rather than the timid and slightly clueless look of an Iceland Gull. He added than on the Beauly Firth, as in Shetland, Iceland Gulls do not gulp away on rubbish tips but are rather delicate feeders on small bits of fish offal and fish fry. The pattern of return in August with Herring Gulls was identical to that of an albino Herring Gull at Inverness discussed below.

R. J. Tulloch was struck by the head shape, bill size and expression of the bird as being typical of a Herring Gull, the Iceland's head shape being more like a Common Gull or young Herring Gull. He had seen many Iceland Gulls in Shetland but never yet an adult.

D. Coutts also stated that it was not an Iceland Gull, having the wrong expression on its face. The bill was too long and deep and the top of the head too flat. The feet were too big: the Iceland has dainty feet with much shorter toes than the Herring and they are not so wide across the webs. The legs were longer than an Iceland Gull's.

D. I. M. Wallace merely observed that the bird was undoubtedly an albino Herring Gull—similar to one discussed

below that he had seen in Jersey in 1956.

One might have thought that all this was pretty conclusive, but ingenious arguments remained to keep the matter open. Then, on 27th October 1966, W. M. M. Eddie and D. J. Norden, planning how to capture the bird and establish its identity, found that it had moulted some or all of its primaries and that the new feathers were marked with a very pale grey-brown which contrasted slightly with white mirrors at the tips of the feathers—in other words, a pale washed-out version of typical Herring Gull primaries. This had not been evident in the two previous winters.

This long account would hardly be justified by the occurrence of one albino or leucistic Herring Gull, except that there seems to be a need to emphasise that albinism can quite readily occur among white birds. Caution is needed in identifying Glaucous, Iceland, Ivory and Mediterranean. Gulls to be sure that they are not in fact albino Herring, Common and Black-headed Gulls, as a few examples will show.

Several albino Herring Gulls which were at first thought to be Iceland Gulls have been noted in Scotland in recent years. One bird at Leith in the winter of 1955/56 and again in August 1956, assuming it was the same bird, seems to have been identified as both Glaucous and Iceland, doubtless because its bill and size were intermediate, as one would expect of a Herring Gull (*Edinburgh Bird Bull.* 6: 32, 48, 71). The outer primary of at least one wing of this bird had dusky or black markings and was mirrored like a Herring Gull's, though this was by no means easy to see under normal conditions of observation, with the bird sitting on the sea. Doubts were expressed also about supposed sightings of Iceland Gulls, perhaps this same bird, in the same general area in 1958 (*loc. cit.* 8: 39, 69).

In Jersey D. I. M. Wallace mistook a bird seen briefly on 11th April 1957 for a fourth-year Iceland Gull, but better views twice in the next four days showed that it was an albino Herring Gull, with wingtip markings faintly present and sexual displays to other Herring Gulls. It was a small bird but, above all, it had the 'nasty' look of a Herring Gull. The orbital ring was in fact noted as brick–red.

A white gull was at Inverness during winter 1961/62 (and perhaps earlier). R. H. Dennis first had good views of it on 12th November 1962, up to which time it had been regarded as an Iceland Gull. It was in fact an albino Herring Gull—all white, but with grey-shadowed wingtips with white mirrors, difficult to see except as the bird banked away in flight. It was as if the wingtip pattern had been painted

over with one coat of white paint and still showed through. The size and shape of the bird and its bill, legs and eyes were similar to a nearby Herring Gull. It has returned each winter up to 1966/67, arriving in autumn and staying in the same places each year until March or April. The bird has remained white, but after each moult the wing pattern has become slightly more obvious.

R. H. Dennis has also seen two albino Common Gulls—a pure white bird with normal soft parts at Fair Isle in autumn, and a first-year bird with white wings at Inverness in winter 1965/66. There are records in the *Edinburgh Bird Bulletin* of one definite albino Black-headed Gull and another probable (8: 37)—the latter taken for a rarity at first—and of a bird which was initially thought to be an Ivory Gull but was more probably an albino Common Gull (1: 19; 8: 37). M. J. Everett and G. Waterston saw an almost wholly white Black-headed Gull on Horse Island, Ayrshire, on 2nd June 1966.

The identification of the *"Carrick"* gull still troubles some experienced observers who have seen it. The arguments used to identify it as an albino Herring Gull are highly subjective, especially when doubt is expressed whether the wingtips do in fact show any markings. Professor M. F. M. Meiklejohn found it very puzzling compared with an immediately recognisable albino Herring Gull he had seen in Stornoway on 18th November 1961 (*Scot. Birds* 2: 56, 107, 490).

Such difficulties with the *"Carrick"* gull serve to emphasise the doubts as to the correct level at which to group Iceland, Herring, Lesser Black-backed and related gulls, whether as a single species, or as individual species, or as components of a superspecies. In view of their close relationship it may be that some borderline or aberrant individuals could prove virtually impossible to identify in the field. The palest of the group are the Iceland Gull (from Greenland) and Kumlien's Gull (from arctic Canada), and this note has concentrated on these, but it must be admitted that there remain the possibilities of mutation and hybridisation to account for the *"Carrick"* gull. The simpler view, that it is an albino or leucistic Herring Gull, seems preferable; but unless the bird can be examined in the hand by a competent taxonomist it seems likely to go on puzzling people.

It is certainly thought-provoking that this is the best that can be said after long and close investigation involving much correspondence and many views of the bird by various observers. One must wonder how many reports of Iceland Gulls really refer to albino Herring Gulls, in spite of the editorial checking they are given. The common feature seems to be that the bird is first reported as an Iceland Gull and

then later, assuming that it stays in the area, this is challenged by someone with field experience of genuine Iceland Gulls who finds that the bird just does not look right for that species. Sometimes this leads to a prolonged impasse between the supporters of the rival views, for it is often difficult to produce any one conclusive feature that cannot be discounted or disputed. The sometimes subtle distinctions between Iceland Gulls, small Glaucous Gulls and albino Herring Gulls can obviously be difficult if one has no previous experience of them. Some help may be had, though rather with the Iceland/Glaucous distinction than with freaks, from a study of papers in *British Birds* 40: 369-373 (14 plates); 43: 399-402; 56: 263-266 (4 plates).

Summary

A white gull that has been seen in Glasgow between August and May in recent winters is described and the problem of identification discussed. Examples are quoted of albinism in British gulls to show the risk of mistaking such birds for other species.

Short Notes

Green-winged Teal in Lanarkshire and Dunbartonshire

On 8th January 1967 at Gadloch, Lenzie, Lanarkshire, I set up my 45x telescope on a post 200 yards from the loch, pointed it in the direction of some birds standing on the ice, and by sheer coincidence brought into focus a drake Green-winged Teal. It was near a flock of European Teal and I immediately recognised it by the short but clearly visible white vertical stripe on the breast in front of the carpal joint. The white horizontal stripe above the folded wing of a Teal was missing from the American bird. Otherwise it was identical to the European ones. I did not see any buff feathers where the green and brown meet on the head, but in fact these were hard to see on some of the European birds.

I saw the Green-winged Teal again on 15th January. It was difficult to pick out among the other Teal, but once located it quite clearly showed the white vertical stripes, especially head-on.

During the week it was seen by W. Wyper, R. A. Jeffrey, J. M. S. Arnott, C. E. Palmar, J. Mitchell and others. This I believe is the eighth record of this American race of the Teal in Scotland.

BERNARD ZONFRILLO.

(Mrs J. B. Hutchison confirms that the bird was seen fre-

quently at Gadloch from January to March, and at Twechar Marsh, Dunbartonshire, on 4th, 5th, 6th and 12th April. Checking back at Gadloch left little doubt that the same bird was involved at both places.—Ed.)

Blue-winged Teal in Orkney

While examining ducks on Hooling Loch, North Ronaldsay, on 10th November 1966 I noticed an unfamiliar one sitting on the edge of the loch with the Teal. From the following description I identified it as a drake Blue-winged Teal:

> Forehead dark brown; cheeks, nape and side of head very deep maroon or plum, with white crescent in front of eye and down to throat; mantle brown, edged with light brown; scapulars similar, but faint green tinge seen in sunlight; back and rump brown, with seemingly a deep green gloss over the whole area in the sun; breast and belly buff with brown spots, decidedly larger on flanks and merging into vertical brown stripes (seven counted) towards tail, separated from black under tail-coverts by small vertical white stripe; tail brown; primaries brown; secondaries of closed wing showing intense metallic blue; greater wing coverts tipped white; lesser and median coverts blue; bill black; feet yellow.

The bird was observed for 30 minutes with 7x50 binoculars in a force 5 northerly wind with occasional glimpses of the sun.

Kenneth G. Walker.

(With the usual reservation that almost any goose or duck could have escaped from a collection, this is the fifth acceptable Scottish record and the first for 16 years. The species has previously been recorded three times in the Outer Hebrides between 6th September and 10th November and once in Dumfriesshire in 1858.—Ed.)

Scaup breeding in Orkney

During summer 1965 a pair of Scaup was seen on and around a loch in North Ronaldsay, the male often feeding on the loch but the female (with a well defined white band at the base of the bill) being seen only in flight. The area where the female landed was searched on numerous occasions, but the cover was dense and no nest was found, though breeding was suspected. For three weeks the female was not seen, until 12th July, when I appeared suddenly in view of a small sheltered area of open water and saw her with four three-quarter-grown young. All five immediately dived. The female surfaced first and took to the wing, calling in a very agitated way. She was followed by one of the young, which being unable to rise flapped its way across the loch into a mass of irises 15 yards away. From the notes

I took at the time I later identified it with the aid of the *Handbook* as a juvenile male. The other three young birds surfaced very close to the irises, but before they disappeared I noticed that two of them had very narrow white bands at the base of the bill.

A pair was seen again in 1966 but breeding was not proved.

KENNETH G. WALKER.

(This is evidently the first satisfactory record of Scaup breeding in Orkney. The species has bred occasionally in the Outer Hebrides and in Ross, Caithness and Sutherland, but there are hardly any recent records.—ED.)

Least Sandpiper in Clyde

On 11th September 1965 at 1850 hrs GMT we saw an unfamiliar wader, which we later identified as a Least Sandpiper *Calidris minutilla,* at the Wilderness Sand Quarry near Buchley Farm (grid ref. 591722), Lanarkshire, 1½ miles west of Cadder. It was watched for six hours the following day and seen by J. M. S. Arnott, C. E. Palmar and three others before it disappeared on the 15th after a very heavy rainstorm. WMME managed to take some useful photographs on the 13th, showing the proportions of the bird and its general appearance, but these are not good enough for reproduction here.

It was smaller than a Reeve and about an inch shorter than a Pied Wagtail, both species being present for comparison. It stood slightly higher than the wagtail but its body was not so bulky. It was never very close to a Common Sandpiper but looked a good deal smaller, and in flight had proportionately longer and narrower wings. The plumage pattern in flight was practically identical to a Little Stint's, the upperparts being fairly uniform and the white wing-bar not very noticeable. The bill seemed completely straight from a short distance but close inspection showed a slight decurve at the tip; it was just a shade shorter than the head, very slender, tapering and broadened slightly at the tip (but not bulbous or flattened), producing a shape quite unlike the bill of a Little Stint. The legs were proportionately longer than a Little Stint's (tarsus longer than the bill) and this, together with a more upright, dignified carriage, relatively large squarish head and fat cheeks, gave the bird an entirely different jizz from a Little Stint. It had a capped appearance, and white lines on the back separated the dark mantle and very dark scapulars, so that from above and in front the mantle showed as a blackish triangle bordered on two sides by a white line. At certain angles there seemed

to be a narrow dark collar. The following is the detailed description:

Feathers at base of upper mandible and extreme front of forehead whitish; forehead and crown dark brown with rusty edges to feathers and looking a bit pale-reddish in some lights; the cap ending abruptly at nape, with pale streak (very hard to see) on its lower edge behind eye; lores buffish white with dark brown mark from bill to eye; superciliary, side and back of neck and nape buffish white, lightly streaked dusky, appearing pale greyish from a distance in dull light; no noticeable eyestripe but very thin whitish line over eye, and conspicuous white patch directly behind eye, running almost to nape; narrow eye-ring pale buff or whitish; ear covers buff, streaked light brown; collar and mantle very dark brown, almost black, with narrow orange-brown edges to feathers and a few with white edges; white divisions between mantle and scapulars set very high and not as broad at in Little Stint, nor particularly straight, the two white lines tending to form a V but never meeting, and fading out on lower mantle; scapulars dark brown, almost black, with narrow rusty edges to feathers, some with outer webs with white edges that formed a line which at times looked broader and more prominent than the V; small inconspicuous dark-and-white chequered triangular patch in front of scapulars; lesser and median coverts blackish, with broad buffish white or golden edges; dark brown smudge on carpal joint merging with little contrast with lesser coverts and usually hidden by breast and flank feathers; greater coverts dark with broad ash-grey edges; tertiaries blackish with narrow pale rusty edges on inner webs and distal third of outer webs, gradually becoming buffish towards extreme base of inner webs and remainder of outer webs; primaries blackish, extending just beyond tip of tail; centre pair of tail feathers blackish and others pale brown or buffish grey, becoming whiter towards outer pairs, but not so white as sides of tail-coverts; centre of upper tail-coverts blackish; sides of rump and upper tail-coverts white.

Throat, chin and front of neck pure white; breast whitish with a pale buff wash (pale greyish in dull light) and extremely small, faint, pale grey streaks (exceedingly difficult to detect, so that breast just looked whitish at a distance); smuge on either side of breast (much as on a Common Sandpiper), joined to collar, buff with dark brown mottling and streaks, and fanning out to form spots; belly, flanks and under tail-coverts white, brightest where feathers fluff over carpal joint and on flanks.

Legs and feet extremely dark, looking blackish at 30 yards in dull light, but not studied closely or under better conditions (published descriptions indicate that leg colour is very variable); bill blackish; eye dark.

Never once was the bird heard calling on the ground. In the air the commonest note was a soft, liquid, monosyllabic *peet* which could carry at least 50 yards. This call was occasionally doubled and once it was trebled with an almost Swallow-like quality. Also heard were *cheek* and a soft trilling *trreep-trreep*. Once, when surprised, the bird uttered a rapid *peet-peet-peet-weet-weet* with the last two notes higher pitched.

Its flight was very fast and wavering and once it flew with its legs dangling. It was a very active bird, running here and there and picking at the surface of the mud. Occa-

sionally it ran very fast for short distances like a Sanderling, and it fed mostly out of the water along the wet mud, but a few times it was belly-deep in the water. We were surprised at the speed at which it could run when this deep in the water, and once it was seen to spin like a phalarope.

On the 11th it looked tired and we approached to within 10 yards, but later with Ruffs it rose at about 50 yards. At times we were within 5 yards, but it was always an essentially nervous bird, ducking if any large bird such as a gull flew over. It associated freely with Ruffs, Lapwings and Pied Wagtails but was chased around the pools frequently by the aggressive Ruffs and, to a lesser extent, by the Lapwings. When disturbed it flew off with the Ruffs, and they all returned to the same spot after a flight of at least ¾ mile from the pools, during which they crossed the River Kelvin from Lanarkshire into Stirlingshire several times.

We compared our description with skins of Least Sandpipers (taken in Iowa, U.S.A., mostly in September) and concluded that the bird was a fairly typical juvenile. The only previous Scottish record is of an undescribed bird, now in the Royal Scottish Museum, shot in Shetland on 14th August 1955 (*Fair Isle Bird Obs. Bull.* 3:76; *Scot. Nat.* 1957: 170). It is in fact an adult in heavily abraded breeding plumage (WMME).

W. M. M. Eddie, D. J. Norden.

White-rumped Sandpiper in Outer Hebrides

At Melbost, Stornoway, on 21st November 1966 W.A.J.C. took M.F.M.M. to catch a 'plane and arrived 15 minutes early to have a look at Loch Branahuie, a shallow turf-edged pool among sand dunes. We saw, about 20 yards away, a small wader which showed a white rump when disturbed by a Redshank. It flew to the west side of the loch, but presently returned and fed actively within 15 yards. The light was bad, so that even with 12x50 binoculars the dark parts of its plumage appeared black. We watched it for 10 minutes and made the following notes, from which we identified it as a White-rumped Sandpiper—a name which seems less apt than the former Bonaparte's Sandpiper, considering there are three much commoner sandpipers in Britain with white rumps.

Size about that of Dunlin (Redshank only comparison), but different shape, with long wings projecting beyond tail, giving it a more slender look. General appearance, grey above and white below. Crown apparently black; back blackish with faint V backwards from shoulders; rump white; tail black with no visible white on outer edges; broad pale supercilium and faint dark eyestreak; wings grey, dappled with light flecks, but no obvious wing-bar; underparts white with faint

pink flush on throat and upper breast; breast band of thin dark streaks; legs black; bill black, very slightly decurved at tip, but not so much as in any Dunlin. Call a feeble 'tsip.'

The bird was seen again on the 24th by W.A.J.C., who noted that in a better light the crown and back appeared less black, and by I. D. MacLean on the 24th and 25th. It was last seen by R. MacIntyre on the 27th. On the 25th he was able to photograph the bird with a telephoto lens, and one of his pictures is reproduced to illustrate this note (plate 51).

W. A. J. Cunningham, M. F. M. Meiklejohn.

(There are two previous records of this species in Scotland —in Midlothian on 21st-24th August 1955 and in East Lothian on 12th October 1958 (*Edin. Bird Bull.* 5: 75; 8: 112; *Brit. Birds* 49: 39; 53: 165).—Ed.)

Richard's Pipit in Shetland

At Fair Isle, Richard's Pipits are recorded each autumn in very small numbers, mostly at the end of September or early in October, but there are extremely few acceptable records for the rest of Shetland, no doubt because the bird is easily missed and rather tricky to identify with certainty. On 20th October 1966, driving between grass fields by Sumburgh airport, G. D. Joy and I were attracted by a bird which blew, rather than flew, across the road and settled 30 yards away in a field.

Almost immediately I recognised it as a Richard's Pipit, because I had been to Fair Isle only a week earlier and had spent a considerable time watching three of these birds. This one was wet and bedraggled. Every now and then as it walked about feeding it stopped to flutter its wings, ruffle its feathers, and preen. It walked in the long-legged, rather important manner I had noted on Fair Isle, stopping from time to time to stretch up its neck and look suspiciously round; twice it gave a little, almost convulsive, flutter in the air, but, like at least one of the Fair Isle birds, not seeming to catch anything. Its body looked roughly Skylark size, but standing much taller on its legs, GDJ remarking that with the thickish bill it looked more like a small thrush than a large pipit. Plumage detail and colour were confused by the wet, so that it looked darker than the Fair Isle birds, though browner than a Rock Pipit and with the same sort of general streaking as a Meadow Pipit; the relatively longer tail and white outer feathers were noticeable, and the legs were pale brown.

When flushed it was blown over a hillock without giving

us any reliable flight features, but for me the identification was confirmed when it gave the distinctive, loud and rather harsh *zreep* call as it flew away.

ROBERT J. TULLOCH.

Woodchat Shrike in Orkney

Near the lighthouse, North Ronaldsay, on 8th May 1964 a bird flew past me and landed on a drystone wall. I recognised it as a Woodchat Shrike and took a full description. The day was bright, with passing showers and a force 7 SW wind. I watched the bird for 90 minutes and noted that it constantly moved its tail in a flicking motion and occasionally flicked its wings as well. It made some short flights but took no food during this time.

My notebook was mislaid, and it was only when it came to light lately that I was able to submit the record to the *British Birds* Rarities Committee for acceptance.

KENNETH G. WALKER.

(1964 saw an increase in the number of Woodchat Shrikes recorded in Britain (*Brit. Birds* 58: 368; 59: 301) but this was the only one in Scotland, whereas in 1965, an even better year (*Brit. Birds* 59: 296), there were five Scottish records.—ED.)

The status of the Twite

The following observations on Twite were made during a visit to northwest Sutherland in August 1966. They may be of interest in view of the relatively small amount of recently published information on this species and the present B.T.O. enquiry into the status of Twite in England, Wales and south Scotland.

At Tarbet, 3 miles north of Scourie, parties of 4-20 Twite fed in grassland in the village area. Sometimes there were larger groups, such as about 45 on 12th August on overhead electricity wires. Where the food could be identified it was seeds of sorrel *Rumex acetosa* in 14 instances and of rye-grass *Lolium* spp. once. On many other occasions Twite were perched on sorrel but were not actually seen to feed. Seeds of unidentified roadside weeds were taken once, and on a few occasions Twite fed on moorland near the edge of cultivated ground—a complex of deer sedge *Scirpus cespitosus*, bell heather *Erica cinerea*, dwarf ling *Calluna vulgaris* and moorland grasses. Grassland near Tarbet contained, besides abundant sorrel, much knapweed *Centaurea* spp., ragwort *Senecio* spp. and meadowsweet *Filipendula ulmaria*.

Outside areas of cultivation, or past cultivation, there were few Twite. Thus between Scourie and Tarbet, across 2½ miles of moorland of the type described above, none was seen; and along 3 miles of track across moorland from near Rhiconich to Ardmore, Twite were seen only where a croft was still worked, and at Ardmore where old grassland remained from former cultivation.

This pattern of distribution may partly explain changes in the status of Twite. Harvie-Brown and Buckley (*A Vertebrate Fauna of the Moray Basin* 1895) found them "exceedingly general" in the Cabrach area of Banffshire where they sometimes fed on thatched roofs. They are now uncommon, and the thatched roofs have fallen in or been replaced by corrugated iron or other unpalatable material. The amount of cultivated land has greatly declined. As in Sutherland, areas of heather moorland are not frequented by Twite.

R. Hewson.

Scarlet Grosbeak in Shetland

On 15th September 1966 I came on a Scarlet Grosbeak in the Symbister district of Whalsay. I flushed it off stubble and had good views at down to 30 yards while it perched on fences.

Description Sparrow size and general shape; head, breast and rump bright carmine; scapulars, mantle and back brown; lower breast pinkish white; belly and under tail whitish; bill brown, heavy and conical.

A bird fitting this description had been reported in the same area a few days before, when the weather was very stormy from the west or northwest. It was reported as being in an exhausted condition, and was approached within a few feet as it fluttered in the lee of a stone wall.

John H. Simpson.

(Red males are extremely rare in this country, though brown immatures or females are annual in autumn at Fair Isle in very small numbers, mostly in September.—Ed.)

Current Notes

Compiled by P. J. B. SLATER

(**Key to initials of observers :** D. R. Anderson, W. Austin, R. S. Baillie, D. Baty, Miss P. G. T. Baxter, Mr and Mrs P. Black, Dr W. R. P. Bourne, J. Brock, W. Brotherston, Miss C. F. H. Bruce, R. G. Caldow, E. D. Cameron, L. H. Campbell, N. G. Campbell, J. F. M. Carson, G. M. Crighton, Miss M. H. E. Cuninghame, W. A. J. Cunningham, R. H. Dennis, G. A. Dickson, R. C. Dickson, Miss J. M. Donnan, Hon. H. Douglas-Home, N. Elkins, J. E. Forrest, I. Gibson,

K. Goodchild, C. G. Headlam, K. Holt, J. A. D. Hope, Sir G. Hughes-Onslow, D. C. Hulme, E. N. Hunter, Miss R. S. Hunter, Dr D. Jenkins, P. Johnson, T. H. Jorgensen, D. E. Kelly, J. M. B. King, A. R. Kitson, D. J. Law, A. F. Leitch, J. A. Lister (JALr), D. G. Long, J. A. Love (JALv), A. Macdonald (AMcD), D. Macdonald, M. A. Macdonald, R. D. Macgregor, I. M. MacLean, A. MacRae (AMcR), A. R. Mainwood, A. Malcolm (AMm), S. Manson, R. Marrs, W. Matheson (WMn), Prof M. F. M. Meiklejohn, M. G. Miller, R. H. Miller, J. Mitchell, N. C. Morgan, W. M. Morrison, M. Marquiss, W. Moss (WMs), I. S. Oates, D. W. Oliver, G. Oliver, T. Paterson, B. Philp, R. K. Pollock, J. A. Pollok-Morris, A. Pringle, Mrs I. Rainier (IRr), R. M. Ramage, A. D. K. Ramsay, Dr M. N. Rankin, G. A. Richards, W. K. Richmond, I. Riddell (IRl), G. L. Sandeman, S. Saxby, Mrs A. F. W. Sharp, P. J. B. Slater, H. D. Smith, R. T. Smith, D. M. Stark, A. G. Stewart, Dr C. Suffern. C. Tait (CTt), I. Taylor, Miss V. M. Thom, Miss O. T. Thompson, D. A. Tindal, C. Townsend (CTd), R. B. Tozer, R. J. Tulloch, F. J. Walker, K. G. Walker, Miss E. Wallace, R. Walls, G. Waterston. Mrs M. I. Waterston, Dr R. S. Weir, G. T. White, Mrs J. A. Whyte. W. Wyper, B. Zonfrillo.

Unless otherwise stated all dates refer to 1967.)

Distribution

Records from before 1st March 1967 are excluded from this section except where they are relevant to more recent topics.

Records of **Black-necked Grebes** on Loch Ryan, Wigtownshire, during the winter have been given previously (4: 380, 455): the last to be seen there were three on 11th April (RCD).

In Ayrshire, a **Storm Petrel** was found dead just up from the shore near Girvan on 8th June (RW). In Edinburgh a **Fulmar** was flying round Arthur's Seat on 13th May (DGL), and two were in the same area on 29th (MAM); one flew south over the Braid Hills on 23rd June (GLS). After a period of strong westerly winds one, thought to be the first for Renfrewshire, was seen at Barr Loch on 10th June (IG, GTW).

A **Cormorant** showing the characteristics of the southern race was noted at Black Loch, Wigtownshire, on 12th April (RCD). It seems that the incidence of such birds in the Scottish population may be greater than published observations would suggest, for of about 50 Cormorants in the area of Leven, Fife, each winter there are generally around six which look like southern birds (DWO).

Further north than usual, a drake **Garganey** was at the ponds at Gartocharn, Dunbartonshire, on 16th May (per JM), and a pair of **Gadwall** was on the mudflats at Dornoch, Sutherland, on 14th (DM). The **Pintail** has not previously been recorded in Wester Ross but a drake was frequenting a pond at Gairloch between 28th April and 2nd May. There may be some doubt as to the origin of this bird, however, as a pair was introduced to the same pond in 1965, although these birds

have not been seen for over two years (ENH). A pair was at Kingoodie, Perthshire, on 22nd April (VMT). A duck **Red-crested Pochard** was recorded at Loch of Strathbeg, Aberdeenshire, on 30th April (NE, JALv).

Scaup are often seen on Duddingston Loch, Edinburgh, but the numbers during April were quite exceptional, with a peak of 26 on 27th; 19 were still there on 3rd May (DRA). The last wintering bird to be seen off Musselburgh, Midlothian, was a male on 5th June (IRl). A summer **Goldeneye** was at Gadloch, Lanarkshire, on 12th June (WW, BZ). On 20th May a party of at least eight **Long-tailed Duck** was seen on fresh water at Skaill Loch, Orkney (PJBS), and a very late bird was near Stornoway on 25th June (WAJC).

Richards (*A Check-list of the Birds of Ayrshire*, 1966) records a pair of **Grey Lag Geese** breeding on a loch in the county in 1963 and 1964. There appears to have been a substantial influx of breeding birds since then, as 12 nests were found this year at the same place (JAP-M).

Four **Bean Geese** were seen near Cameron Reservoir, Fife, in association with Pinkfeet and Greylag on 2nd April; they were unringed and wary (PGTB, DWO). On 30th April 4000 **Pink-footed Geese** were still at Tibbermore, Perthshire (VMT), and there are several reports of skeins moving north in early May. A pair of birds at Loch of Hillwell, Shetland, on 24th May proved to be **Bar-headed Geese** and were presumably escapes as this is a central Asian species (per RJT). Four adult **Snow Geese**, one of them ringed, were first recorded at Wooden Loch, near Eckford, Roxburghshire, on 10th June and were still there on 24th, by which time they were beginning to moult (RSB). One, also bearing a ring, was on North Ronaldsay, Orkney, on 12th and 13th May (KGW). There is also an earlier report of two with Greylags at Loch Spynie, Morayshire, on 15th January (AP).

Two **Brent Geese** were seen flying in to Aberlady Bay, East Lothian, on 23rd April (WKR per GW). A Pale-bellied bird was at the Ythan estuary, Aberdeenshire, on 27th April and again on 10th May (NE), and in Lewis two were noted at Broad Bay on 23rd May (IMM), and again on 4th June, when one was seen to have an injured leg (WAJC). A large count of **Barnacle Geese** for Perthshire was of 16 at Tibbermore on 9th April (VMT).

Canada Geese are reported nesting at Loch Mahaick, near Doune, Perthshire. One mated to a hybrid goose was unsuccessful but a normal pair reared four young (TP). A pair on an island in Loch Tummel, Perthshire, on 14th May may have been nesting (PGTB). The only report so far of the flock which congregates annually on the Beauly Firth to moult is of 123 at Newtown Bay, on 20th June (DCH).

In May three **Whooper Swans** were at Loch of Strathbeg on 14th (NE, WMM), and one was at Loch Mallachie, Inverness-shire, on 27th (RBT). Four were at the Ythan estuary on 1st and one was still there on 23rd (NE, WMM). June records are of two adults on Loch Hope, Sutherland, on 13th (DCH), and one on the River Ayr between 22nd and 28th (AGS). A pair of **Bewick's Swans** was recorded at Gadloch, Lanarkshire, on 7th May (WW, BZ).

In the Queen's Park, Edinburgh, where this species is rare, a **Buzzard** was seen flying over Duddingston Loch on 12th February (DRA), and one was circling round Arthur's Seat on 2nd June (DGL). A **Rough-legged Buzzard** was recorded at Lang Crags, near Dumbarton, on 22nd April (DJL).

Several **Marsh Harriers** were reported during the second week of May, at a time when southeast winds were bringing large numbers of smaller migrants into the country. In Aberdeenshire, a female was at Blackdog links, just north of Aberdeen, on 7th and 8th (LHC, JALv, MM, BP), and what may have been the same bird was at Strathbeg on 14th (NE); a male was at Balmedie on 10th (ADKR). Further north, a male was seen near Reay, Caithness, on 7th (KG), and a female was on Fair Isle, Shetland, between 9th and 11th (RHD). A female was quartering a marsh near Machrihanish, Argyllshire, on 13th (JB, CTd).

An **Osprey** was found dead at Bridge of Don, Aberdeenshire, on 7th May (MM); one was in the area of Old Dailly, near Girvan, Ayrshire, from 13th to 15th May (GH-O, RW); and one was seen flying over Temple, Midlothian, on 22nd May (JALr). At the observatories, one was on Fair Isle on 8th and 9th May (RHD), and one was seen on the Isle of May on 31st (per AMcD). At Eyebroughty, East Lothian, where this species was seen twice last year (4: 243, 316), one was noted on 2nd July (RSB).

The only **Quails** heard have been in the north. In Shetland, at least one was calling on Foula between 9th and 11th June (ARM), and on Fair Isle there were singles on 24th and from 28th to 30th May and up to three in song during June (RHD). One was heard in a field near Invergordon, Easter Ross, on 10th June (CGH).

A **Spotted Crake** was back at the marsh in West Sutherland where several were heard calling last year (4: 372) by 24th April (per DM). The earliest **Corncrake**, and the only April bird, was at Yetholm, Roxburghshire, on 16th (per RSB): the first at Fair Isle was not until 5th May (RHD).

A **Coot**, apparently the first to breed at Aberlady, was seen on its nest at the Marl Loch on 21st May, and on 24th June the pair was seen with two young (AFL). Also in East

Lothian, a single bird was on the sea outside North Berwick harbour on 27th June (MIW).

Oystercatchers were proved to breed at Tentsmuir for the first time this year, though suspected of doing so previously. An egg-shell was found on Earlshall on 22nd May and the alarm of the pair showed that they had chicks (DWO). In Lewis, the breeding population of **Lapwings** was noticeably greater than in the past few years (WAJC).

Dotterel probably bred in Sutherland in the middle of the last century (2:182), but a nest containing two eggs found in the North division of the county this year is the first record since (DCH).

Spring records of **Black-tailed Godwits** are as follows:

Foula—1 from 28 Apr to 4 May (ARM).
Fair Isle—3 on 19th; 6 on 20th and 21st and still 2 on 25 Apr (RHD).
Torridon—1 beside small pool on 2 May (ENH, EW, JAW).
Montrose Basin, Angus—2 on 18 May (GMC).
Eden Estuary, Fife—30 on 14 Apr (GO).
Aberlady—1 on 12 Apr (AFL, MAM); 2 on 22 May (WMs).
Seafield, Midlothian—1 on 1 Apr (WMs).
Barassie, Ayr—wintering bird (4: 384, 458) up to 7 May (GAR).
Troon, Ayr—1 on 16 Apr (RGC).
New Cumnock, Ayr—1 on 16 Apr (RM).

At the locality in southern Scotland where a pair of this species has bred each year since 1964 (4: 317), there is a possibility that two pairs nested this summer. Only one bird was present on 13th and 23rd May but on 29th two pairs were in the area. Their behaviour on 8th June suggested that there was at least one nest and three adults were calling anxiously some distance from the original territories at the beginning of July (Ed.).

In Aberdeenshire, single migrant **Green Sandpipers** were seen over Meikle Loch on 25th April (NE), and at the Ythan estuary on 8th May (WRPB). Between 5th and 11th May one or two were seen daily on Fair Isle (RHD). A **Wood Sandpiper** was at Montrose Basin on 10th May (GMC); there was one on Fair Isle on 8th and 9th and another on 26th (RHD); and one was at Skinflats, Stirlingshire, on 26th June (IT).

While the first **Common Sandpiper** was at Glencorse reservoir, Midlothian, by 9th April (CFHB, ADKR), the next birds were not until 17th, when one was at Aberlady (MAM), and another at Yetholm (RSB). In Lewis, two had arrived by 29th April (IMM), and passage at Fair Isle started with three on 7th May (RHD).

Wintering **Spotted Redshanks** previously mentioned (4: 458) included one at Broomberry, Ayrshire, which was there up to 22nd April (RBT), and one at Aberlady which was seen on 5th and 12th April (AFL, MAM) and again on 27th, by

which time it was getting into summer plumage (JADH). A further record is of one at Tentsmuir on 13th April (PGTB). The first **Greenshank** to be back in Lewis was seen on 8th April (IMM).

A **Temminck's Stint** on Foula on 25th May fits the general pattern of the handful of Scottish spring records, which are almost all from Shetland (ARM). A curious date for a **Curlew Sandpiper** was 24th June when one was at Aberlady (MAM).

A record of a flock of **Ruffs** at Aberlady in early March has already been given (4: 245); these birds were apparently present in a field there between 3rd February and 27th March, the maximum count being 25 (DJ). Also at Aberlady, a male in full breeding plumage was seen on 23rd April (WKR per GW). Five birds of this species were at Garlieston, Wigtownshire, on 9th April (PGTB); and in May, singles were near Kilwinning, Ayrshire, on 6th (GAR); at the Ythan estuary on 8th (WRPB); and at Gartocharn on 16th (per JM). One was at Paisley Moss, Renfrewshire, on 15th May and 4th June (GAD, IG, GTW).

The first **Arctic Skuas** to return to their breeding sites on Foula were four seen on 22nd April (ARM). In Aberdeenshire, two were seen off Cruden Bay on 25th May and one at Balmedie on 23rd June (NE). Single **Great Skuas** were noted in the same county at Sands of Forvie on 12th June and at Balmedie on 23rd and 24th (NE); and also at Fife Ness on 12th June (PGTB). One was near Stornoway on 25th June (WAJC), while one at Garroch Head, Bute, on 27th May had a wing and leg caught in some string but was otherwise in good condition, flying off immediately when freed (WW, BZ). The first back on Foula were two on 25th March; by 22nd April 1000 were there (ARM). On 23rd May a **Pomarine Skua** was recorded there (ARM).

Single **Glaucous Gulls** were seen at Fair Isle on 4th, 10th and 12th June (RHD), and two even later birds were at Scrabster harbour, Caithness, on 23rd (KG, SM). An **Iceland Gull** was at Wick, Caithness, on 4th April (per DMS), and an immature was at Nigg Bay, Kincardineshire, on 18th March (MM). At least six **Little Gulls** were at Morton Lochs, Fife, on 23rd April (AMcD); an immature was at Carnoustie, Angus, on 19th May (GMC); and two were at Kilconquhar Loch, Fife, on 27th June (PGTB).

The most striking feature of the quarter was an influx of **Black Terns** in the north between 5th and 10th May:

Shetland—On 6th: 1 at Fair Isle (RHD). On 7th: 3 at Cullivoe, Yell; 3 at Aywick, Yell; 2 at Clickhimin; 2 at Hillwell. On 8th: about 10 at Otterswick, Yell; about 6 at Spiggie; 4 between Unst and Hascosay. On 9th: 2 at Whalsay and 1 at Fetlar (per RJT).

Orkney—4 on North Ronaldsay on 9th (KGW).
Lewis—1 at small loch in the outskirts of Stornoway on 7th (WMn).
Moray—1 at the mouth of the Spey on 5th (IT).
Aberdeen—5 at Cruden Bay on 8th (WRPB); 3 at Blackdog links, Aberdeen, on 7th and 2 on 8th (LHC, JALv, MM, BP); 1 at Bridge of Don on 7th (MM); and 2 flying north near Balmedie on 10th (ADKR).
Angus—1 at Montrose Basin on 7th (GMC).

The first **Common/Arctic Terns** seen were three off Aberdeen on 16th April (CFHB, ADKR), and one had reached North Ronaldsay by 29th (KGW). The earliest definite **Common Tern** was at Kingoodie on 22nd April (VMT), and an **Arctic Tern** at Stornoway on 12th May had arrived at about the usual time (WAJC). No fewer than 85 **Roseate Terns** were resting at Shell Bay, Elie, Fife, on 2nd June with 40 Sandwich and 2 Common Terns (PGTB). April **Little Terns** were one at Turnberry, Ayrshire, on 18th (GAR), and three at Aberlady on 27th (JADH). Two were recorded on North Ronaldsay on 7th May (KGW). Two **Sandwich Terns** flying west at Cramond, Midlothian, on 4th April were the first (DB, ADKR); on 5th one was at Aberlady (MAM, ADKR), and two were seen at Kirkcudbright (PGTB). One was reported at Skirza, Caithness, on 11th (per DMS).

A **Little Auk** was found about 20 miles inland at Leitholm, Berwickshire, on 18th April (HD-H per GW). The scarcity of **Puffins** in the southwest makes it worth recording one seen off Prestwick, Ayrshire, on 18th April (GAR), and four close inshore at the Mull of Galloway, Wigtownshire, on 25th June (RDM, RBT).

A **Turtle Dove** was seen amongst a flock of **Collared Doves** in a Dumfries garden on 29th May (JMD). Few arrival dates for **Cuckoos** have been reported: the only April birds were one heard at Dunbeath Strath, Caithness, on 16th (per DMS), and one near Carlops, Peeblesshire, on 29th (AFL).

Long-eared Owls in unusual areas were one seen hunting in broad daylight at Airlie, Angus, on 28th May (DAT), and an adult at Rosemount, Perthshire, on 23rd June (VMT).

An April **Swift** was seen in Glasgow on 29th (ADKR). On 2nd May, one was at Craiglockhart, Edinburgh (AFL), and two were recorded at Braco, Perthshire (RMR). Of many reports during the ensuing week the furthest north were two at Inverness on 6th (DCH), and three at Fair Isle on 7th (RHD). About 100 were observed in incongruous surroundings, catching insects over a large area of snow on the summit of Ben Lawers, Perthshire, on 11th June (AFL).

On 29th May a **Hoopoe** was watched for about two hours amongst birch trees at Inverey, Aberdeenshire (MNR).

A female **Green Woodpecker** was noted at Faskally, Perth-

shire, on 7th May (NCM), and a pair was heard on Inchcailliach, an island in the Stirlingshire part of Loch Lomond, on 6th April (JM); both records are on the edge of the range of this species.

Early May saw a spectacular fall of continental migrants in Shetland. Among the less common species involved were **Wrynecks**: six were on Out Skerries on 8th (RJT), one on Foula on 8th and 9th (ARM), and on Fair Isle five were present on 7th, three on 8th and five on 9th, as well as singles later in the month (RHD).

Single **Short-toed Larks** were at Fair Isle on 7th and 11th-13th May (RHD). The **Shore Lark** at Leith Docks, Edinburgh (4: 460), was there for longer than previously stated, being seen in the area on 26th February (WMs). In Berwickshire, five were at Coldingham Loch on 17th April (CTt), and not far away, fine views were had of at least 17 spread across a field in the area of Fast Castle on 20th April (JADH). A remarkable movement took place in Shetland during May. On Fair Isle, where this species is rare in spring, six were seen on 3rd, three on 8th, one on 10th, two on 11th and three on 12th and 13th (RHD). One was on Foula on 20th and 21st, with five on 22nd, at least four on 23rd and one on 27th (ARM).

A very early **Swallow** was at Troon on 21st March (AMcR), and another at Applegarthtown, Dumfriesshire, on 23rd (RTS). The next records were not until 9th April when one was at Colinsburgh, Fife (DWO), and 10th when one was seen at South Queensferry, West Lothian (ADKR). Reports from 15th to 19th April are too numerous to list but suggest a substantial arrival during this period. Swallows bred in Stornoway last year (4: 247); this year they returned to the same site and another nest containing young was found elsewhere in the area (IMM). A **House Martin** was seen at Musselburgh on 17th April (MAM), and by 18th singles had returned to St Andrews, Fife (MHEC), and Aberdeen (CFHB, ADKR). Good numbers were amongst the hirundines recorded with other migrants in Shetland during May.: four at Fair Isle on 7th were the first there (RHD). The earliest **Sand Martins** were right at the start of April: ten at Lochmaben, Dumfriesshire (RTS), and one at Aberlady (THJ) on 1st; one at Fife Ness on 2nd (DWO). Four at Braco, Perthshire, on 11th (RMR) is the only other record before 16th but, as with Swallows, many seem to have arrived in the few days after this.

A **Jay** on North Ronaldsay on 11th May is the first to be recorded in Orkney, being well north of its normal range (KGW). Also in May, one was at Auchairne House, Ballantrae, Ayrshire, on 7th (GH-O). Another unusual occurrence

was a **Chough** seen briefly at the roadside near Daviot, Inverness-shire, on 23rd April (CS).

An early **Dipper** nest, especially for so far north, contained three fully fledged young at Carloway, Lewis, on 8th April. They had left a week later (WAJC).

The peak spring count of **Fieldfares** at Fair Isle was of 1200 on 7th May. Late birds were two there on 11th June (RHD), and one on the Isle of May on 24th May (AMcD). A **Redwing** was singing at Gairloch between 25th May and 15th June, but was not heard subsequently (ENH).

A very early **Ring Ouzel**, doubtless wintering, was at Braemore Junction near Ullapool, Wester Ross, on 12th February (ADKR). March birds, all cocks, were two near Garvald, Midlothian, on 26th (WB); one near Anstruther, Fife, on 27th (DWO); one singing at Westwater reservoir, Peeblesshire, on 25th (JADH); and two at Loganlea reservoir, Midlothian, on 30th (ADKR).

A few lone male **Wheatears** were recorded in the last few days of March: at Garvald on 25th and 26th (WB); near the top of Soutra Hill in Berwickshire, on 25th (RSB); at Peat Inn, Fife, on 27th (DWO); at Gifford, East Lothian, on 28th (KH); and at the mouth of the River Doon, Ayrshire, on 29th (AMcR). By 2nd April there were several males and two or three females at Garvald (WB). Four on 12th were the first at Fair Isle (RHD). Two **Whinchats** on Fair Isle on 4th May (RHD), and one on Foula on 6th (ARM), were the first noted, but the almost total lack of records from further south makes it impossible to decide when they arrived. The same applies to **Redstarts**, the only April observations being one heard at Yetholm on 15th (RSB), one on Foula on 26th (ARM), and a pair at Ladykirk, Berwickshire, on 29th (DWO).

A female **Black Redstart** was on Out Skerries on 8th May and a male on Fetlar on 9th (RJT). The first on Fair Isle was on 13th April and good numbers were seen throughout May, with maxima of four on 29th and five on 30th (RHD). The same applies to Foula, where three on 10th was the maximum (ARM). In Fife, females were on the Isle of May on 9th and 12th April (LHC, JALv, BP), and a cock was at Fife Ness on 15th May (DWO). The first **Nightingale** for Orkney was caught at North Ronaldsay on 11th May (JMBK, KGW), and singles were at Fair Isle on 8th May and 10th June (RHD). Several **Bluethroats** were recorded at Fair Isle between 18th and 27th May, the largest daily count being three on 23rd (RHD). On 6th May a bird of the White-spotted race was on North Ronaldsay (KGW), and a male Red-spotted bird was at Fife Ness on 14th (DWO).

Several observers have commented that **Grasshopper Warblers** have been more common than usual this year: certainly May

records for Shetland suggest a good passage. Single birds were seen at Fair Isle on five days between 5th and 25th May (RHD), and one was at Foula on 10th (ARM). Reeling birds are reported from the following counties:

Easter Ross—1 caught and ringed at Maryburgh on 20 May was there with a mate and 3 newly fledged young on 2 July (DWO, HDS).
Inverness—1 by Nairn road a few miles east of Inverness on 7 May (AP).
Angus—2 at Forfar Loch on 16 May (GMC).
Fife—1 at Fife Ness from 30 Apr to 23 May at least (PGTB, JEF, DWO); 1 at Earlsferry on 25 and 29 May; 1 at Largo Bay on 5 June; 1 at Kilconquhar on 29 Apr; 1 beside road between St Michaels and Tayport on 10th May, first for Tentsmuir (DWO).
Perth—2 at Braes of Doune on 12 May (RMR).
Midlothian—1 in Blackford Glen, Edinburgh, on 13th June (MAM).
East Lothian—1 at Gifford during May and June; 1 at Haddington in June (per AMcD); 1 at Aberlady on 22nd and 24 June (PJ, AFL, GLS); 2 at Yellowcraig on 7 May; 1 at Eyebroughty Point on 25 June (RSB).
Roxburgh—1 at Yetholm on 21 May (RSB).
Argyll—1 at Minard on 13-14 May (JB, CTd).
Lanark—1 at Biggar on 18 May (RSH).
Renfrew—count in early June revealed: at least 3 at Castle Semple and Barr Lochs; 4 or 5 at Caplaw Dam; 1 at Georgetown; 2 in Bishopton area (IG, GTW). Also 2 were at Uplawmoor on 7 May (AMm); and 1 at Langbank on 6 June (GAD).
Ayr—1 at Dalrymple on 28 April (RBT).
Wigtown—first at Moor of Genoch on 25 Apr; 3 there on 27th (RCD).

This list is, of course, not comprehensive as it does not include records from several areas where this species breeds regularly.

As with most other species, **Sedge Warblers** returned at about the usual time, there being two records in April: one at Kilconquhar on 23rd (DWO), and one at Martnaham, Ayrshire, on 29th (GAR).

This spring at Fair Isle was exceptionally good for continental migrants with big falls in both early and late May. A characteristic of this latter influx was the unusual number of **Icterine Warblers** involved. Six on 25th May were the first, the highest count was eight on 27th and the last was seen on 5th June (RHD). An unringed bird was found singing near Invermark Castle, Angus, from 11 a.m. until 4 p.m. on 23rd June—a very odd date, suggesting that it had taken up residence—but it could not be found on subsequent visits (PB, GMC).

A wintering female **Blackcap**, first seen in Banff on 22nd February (4: 460), was last noted there on 22nd April (AFWS). A male was seen near Minishant, Ayrshire, on 8th May (GAR), and one was singing near Lake of Menteith, Perthshire, on 28th (MFMM). A further male was seen feed-

ing young in the Hermitage of Braid, Edinburgh, on 26th June (GLS).

Barred Warblers are recorded very much less frequently in spring than in autumn: one which was caught on Foula on 1st June was last seen on 8th (ARM).

The earliest **Garden Warblers** on Fair Isle were two on 5th May (RHD), and one was at Fife Ness on 6th (DWO). The first breeding record for Sutherland is of one, feeding young and singing, on the slopes of Ben Hope on 13th June (DCH).

On 21st April a **Whitethroat** was seen in Finnich Wood, Stirlingshire (RKP), and one was back in Dumbarton by the same day (DJL). The only other one in April was at Ladykirk, Berwickshire, on 29th (DWO). By 8th May they were numerous in Midlothian (AMcD). A **Lesser Whitethroat** was singing on the north side of Threipmuir reservoir, Midlothian, on 10th June (MAM).

A **Willow Warbler** was heard in Dumfriesshire on 5th April (RTS), but the next reports were not until 16th, when two were at Liberton, Edinburgh (MAM), and two in Seaton Park, Aberdeen (CFHB, ADKR). In this species, as with others, the main arrival seems to have occurred during the following week: on 16th none was heard in Saltoun Woods, East Lothian, but they were numerous there by 23rd (NGC, PJBS).

An early **Chiffchaff** was at Rockcliffe, Kirkcudbrightshire, on 20th March (WA). In April, one was at Crosshill, Ayrshire, on 5th (RBT); one at Yetholm on 9th (RSB); and four at Lochnaw, Wigtownshire, by 11th (RCD). Birds singing in northern localities were two within 100 yards of each other at Skibo, Sutherland, in May and June (DM); one near Edzell, Angus, on 11th May (GMC); one near Muir of Ord, Easter Ross, on 17th June (DCH); and one in Stornoway Woods for three weeks from 23rd April (IMM).

Several **Wood Warblers** singing at Aberfeldy on 29th April were well up to time (VMT), and one was at Dirleton on 30th (MFMM). There are few reports of the arrival of **Spotted Flycatchers**, the earliest being near Minishant, Ayrshire, on 8th May (GAR). A pair of **Pied Flycatchers** was seen feeding young near Ardvorlich, Perthshire, on 24th June (VMT).

Two pairs of **Grey Wagtails** bred near Stornoway this year, one of them certainly successfully as the nest contained young on 21st May (IMM, WM).

Numbers of **Yellow Wagtails** were noted with the other migrants during May, particularly in Shetland. The earliest was one at Kilconquhar on 30th April (PGTB, RSW). A *flava* showing the characteristics of a female Grey-headed was

seen near Anstruther, Fife, on 23rd May (AMcD, OTT), at about the time when three of this race were on Fair Isle (RHD).

Further reports of **Great Grey Shrikes** are from the following counties:

Shetland—1 at Fair Isle on 13 Apr and 1 on 23 Apr (RHD); 1 on Out Skerries on 8 May (RJT).
Caithness—1 at Loch Calder on 13 Apr (per DMS).
Wester Ross—1 noted before in Glen Torridon (4: 461), there till mid Apr (JAW).
Kincardine—1 at Banchory on 7 Apr (JALv).
Perth—1 near Lake of Menteith on 13 Apr (RKP); 1 near St Fillans on 31 Dec 1966 and 1, possibly the same, in Glen Tarken on 5 Feb (EDC).
Argyll—2 in Lochgilphead on 23 Mar; 1 in Kilmichael Glen on 25 Apr (IRr).
Fife—1 near Kirkcaldy on 9 Apr (DWO); 1 on Isle of May on 10-13 Apr (JALv).

A male **Woodchat Shrike** was at Fair Isle from 9th to 13th June (RHD).

Two **Hawfinches** were seen on several occasions in early April in a garden in Comrie, Perthshire, where a pair had also been seen in May 1966 (ISO). The remains of a female, ringed in east Germany on 27th March 1962 at Meerane, were found at Haroldswick, Unst, on 7th May (per FJW). A single bird was caught on North Ronaldsay on 11th May (KGW), and another was seen flying over Dirleton, East Lothian, at dusk on 15th (MFMM).

A female **Scarlet Grosbeak**, a species of which spring records are rare, was on Fair Isle on 5th June (RHD). Six **Red-headed Bunting** records are all of male birds and all probably escapes: three occurred on Fair Isle in May and June (RHD); one was at Halligarth, Unst, on 10th June (MGM, SS, FJW); one was at Paisley Moss from 23rd to 26th May (IG, GTW); and one was at Burrow Head, Wigtownshire, on 12th and 13th June (DEK, RHM). Odd **Ortolan Buntings** were on Fair Isle between 7th and 26th May, with one on 13th and 14th June. The largest number on one day was three on 8th and 9th May (RHD). Single birds were noted on Foula on several days from 13th to 26th May; three were probably involved (ARM). Two were on Out Skerries on 8th May (RJT).

At Fair Isle a female **Rustic Bunting** was seen on 25th May and a male on 11th June (RHD). Apart from a small passage of **Lapland Buntings** at Fair Isle from 3rd April to 5th May (RHD), two were on North Ronaldsay on 14th April (KGW); and a male, previously noted (4: 462), was still at Skinflats, East Stirlingshire, on 23rd April (JFMC, IT).

Earlier observations—before 1st March 1967

A note of 30 **Shags** in Leith Docks on 18th February was

given previously (4: 456): this count is apparently not exceptional, 70 having been there early in the morning of the same day and the maximum count in several years of observations being over 100 in spring 1964 (CTt).

Single redhead **Smews** were in Aberdeenshire on Loch Skene on 4th December 1966 and at Strathbeg on 12th February (MM). At Rattray Head, in the same county, a **Honey Buzzard** was seen on 3rd September 1963 (ARK), and three **Shore Larks**, possibly the same as those at Newburgh a week later (4: 386), were there on 23rd October 1966 (MM).

General observations—behaviour, etc.

On 16th June a small colony of about five pairs of **Kittiwakes** was discovered to have established itself on the seaward side of one of the jetties at Scrabster harbour, Caithness. The nests were on a ledge about five feet above high water level and were thought to be the only ones on man-made sites in the county (KG).

One of a number of **Swifts** feeding low over Duddingston Loch on 16th May was seen in difficulty after landing in the water. Its repeated attempts to rise were to no avail, but it finally succeeded in covering the 30 yards to dry land by using its wings as paddles (DRA).

A **Blackbird** was heard imitating a **Mistle Thrush** in Athole Gardens, Glasgow, on 8th April. As the thrush uttered its disjointed phrases, the Blackbird copied each one in succession for about five minutes (MFMM.)

Corrections

The report of two Dark-bellied **Brent Geese** at Loch Ken on 11th February (4: 457) was published in error, the report having referred to one at Caerlaverock on 29th January (RBT).

All those records in the last number attributed to R. L. Swann were in fact seen, not by him, but by A. F. Leitch.

Reviews

A Wealth of Wildfowl. Survival Books series No. 8. By Jeffery Harrison. Illustrated by Pamela Harrison. London, Deutsch, 1967. Pp. 176; 12 plates (23 photographs), figures, maps; 21 x 16½ cm. 30/-.

This is the eighth in the Survival Books series (edited by Colin Willock), which aims to discuss "the relations between people and wild animals in a shrinking world." The present book deals with the relationship between wildfowl and men in Britain, especially with the role of men in destroying, creating and modifying wildfowl habitats. There can be few men so well qualified to discuss these problems as Jeffery Harrison, himself a life-long wildfowler, as well as a keen naturalist and pioneer in many aspects of wildfowl management. The author draws

largely on his own knowledge gained both in Britain and abroad, but recent British research in this field is also summarised in most readable form. The book does not set out to discuss in detail duck biology, but four chapters deal with those aspects of ecology, movements and distribution immediately relevant to conservation. One of these discusses the natural causes of duck mortality, dealing mainly with the effects of climate and predators on duck populations. More on the potential roles of disease, parasites and food in regulating populations would have been welcome here.

There is a good deal on the history of duck conservation in this country, and of the development during the past two decades of the fruitful partnership between the Wildfowlers' Association, the Wildfowl Trust and the Nature Conservancy, a process in which the author himself played no small part. The book well shows how successfully wildfowl can be managed, how easy is the creation of suitable refuges, and how adaptable are many species in adjusting themselves to live in close association with man in a rapidly changing environment. The creation and planting of a small reserve in Kent in which the author participated, and its subsequent use by wildfowl, is described in detail and provides some useful tips on management.

The final chapter, entitled "The New Wildfowler," deals largely with the recent activities of the Wildfowlers' Association in establishing and managing refuges, rearing and releasing ducks, and re-establishing species, such as the Greylag, in areas from which they were long since eliminated by man. Let us hope that these reintroductions are carried out sensibly, only with native stock, and on not too grand a scale until the effects of the earliest introductions have been properly assessed. Ideally, detailed records should be kept after an introducton, of population growth, breeding success, annual culls, and, above all, of any conflict with local agriculture.

On the whole the book is balanced and fair, engagingly written, and—unlike many other recent books on conservation—refreshingly optimistic about the future. It is also good value, and if widely read could do a great deal for the conservation/management movement, especially since it illustrates so well the results of cooperation between bodies of apparently conflicting interests. In these problems, Britain is already half a century behind America.

IAN NEWTON.

Longmans Birds : The Blue Tit; The Chaffinch; The Robin; The Swallow; The Song Thrush; The House Sparrow; The Collared Dove; The Black-headed Gull. Eight booklets. By Humphrey M. Dobinson. Illustrated by Robert Gillmor. London, Longmans, 1966. Each 16 pp; numerous coloured and other illustrations. 18¼ x 13½ cm. 15/- the set. 2/- each.

These excellently produced booklets for the younger birdwatcher are very attractively illustrated, mostly in colour. The text is short and easily read, but written in a way that is bound to rouse the interest of the reader at the same time as it gently educates him. Each booklet is full of useful information, and there are details and pictures of closely related species and any that might cause confusion. A particularly useful feature is a section of practical hints and suggestions for things to do. These booklets will be invaluable to anyone trying to encourage children's interest in birds, and many adult birdwatchers will find them irresistible.

ANDREW T. MACMILLAN.

At Man's Door the Crime... By Leslie Hicks. Newquay (Cornwall). L. F. & V. D. Hicks, 1967. Pp. 33; 25 photographs and 10 line drawings (3 on cover). 20½ x 12¾ cm. Paperback 3/6.

This is an account, rather over-dramatised for the reviewer's taste, of the efforts of one dedicated group to care for auks and other seabirds caught in oil from the wreck of the *Torrey Canyon*. Over 1000 birds were picked up, cleaned and taken to places of safety in Operation Seabird Rescue—Perranporth, but the author does not say how many of these died. For the whole area, the July issue of *Birds* tells us that, in spite of the most devoted attention, fewer than 400 then survived of over 5800 birds cleaned and sent to rehabilitation centres.

ANDREW T. MACMILLAN.

Budgerigars in Colour: their Care and Breeding. By A. Rutgers. Revised English edition edited by C. H. Rogers. London, Blandford Press, 1967. Pp. 240; line drawings and 64 colour plates. 18 x 11¾ cm. 25/-.

Eye-opener to the outdoor birdwatcher on the range of possible colour-schemes, and concise textbook for the breeder. A.T.M.

Field and Open Countryside Birds and **Marsh and Riverside Birds. Shell Nature Records.** British Birds series. Nos. DCL 705 and 707. Two 33⅓ r.p.m. 7" records in illustrated descriptive sleeves. Recorded and edited by Lawrence Shove. Published 1967 for Shell & B.P. Ltd by Discourses Ltd, London. 12/6 each.

The fourth and fifth records in a series of which the first was reviewed in *Scot. Birds* 4: 326. Two further records are in preparation—**Estuary Birds** and **Moor and Heath Birds,** Nos. DCL 704 and 706.

Letters

SIR,

Dippers diving in icebound loch

With reference to the note in *Scottish Birds* 4: 450, I regularly saw Dippers diving under the ice on the River Spey when I lived at Newtonmore.

On a further point, Dippers may be found on the shores of Loch Earn at all times of the year, and at least one pair nests on the lochside. The nest is on a ledge on a rock-face jutting into the water, and it is just over a mile, as the Dipper flies, from the foot of the loch. I wonder if there are many records of Dippers nesting over still water, as reference books suggest that they always use a site over running water.

EUAN D. CAMERON.

SIR,

I have often seen Dippers diving into rivers from ice at the banks. This is a typical winter sight at Crathes Bridge

on the River Dee in Kincardineshire; the river is usually frozen for 3-4 feet at both banks in midwinter. This behaviour is obviously quite normal, and I discussed it with Ray Hewson when we watched it one day near Applecross.

DAVID JENKINS.

SIR,

The Magpie in western Scotland

Regarding T. D. H. Merrie's notes on Magpies in Argyll (*Scot. Birds* 4: 449), I have seen them in Knapdale as follows: two mobbing a Buzzard on 4th March 1955 above the Crinan Canal at Bellanoch; one reported, but not seen by me, in October 1956 about three miles from Tayvallich; one on 14th December 1958 at Achnamara at the head of Loch Sween; and one on 15th December 1961 at Tayvallich. They are now quite well established in Asknish, Loch Gair, five miles NE of Lochgilphead (as marked on T. D. H. Merrie's map), and I have seen there, one on 22nd September 1965, two on 5th March and 28th April, eight on 30th April and seven on 12th August 1966.

I. RAINIER.

SIR,

In the summer of 1966 I saw a single Magpie flying into the woods lining the A815 between Tom Dubh and Bathachban, near the head of Loch Fyne. Recent enquiries among local people further down the loch produced unsubstantiated sightings at Strathlachan Forest, north of Lephinmore Point, which lies more or less opposite Ardcastle Wood, Asknish, where also Magpies have been seen.

CHRISTOPHER O. BADENOCH.

SIR,

Several notes have appeared in the *Campbeltown Courier* (8th, 15th and 22nd June 1967). A Magpie was reported separately by two people at Saddell, about 9 miles north of Campbeltown; then one was seen at Baraskomil, just outside Campbeltown on the Carradale road; and finally a correspondent wrote wondering if it could be the pet bird that a couple left near Tarbert because it seemed to like the area. They could, of course, all be different birds.

FRANK R. TRAYNOR.

Official Section

TWENTIETH ANNUAL CONFERENCE
HOTEL DUNBLANE, PERTHSHIRE
27th to 29th October 1967

Friday 27th October

5 to 7.30 p.m. and 8 to 9 p.m. Conference Office in the Hotel Dunblane opens for members and guests to register and collect name cards and Annual Dinner tickets.

6.15 p.m. Meeting of Council.

8.30 to 9.30 p.m. FILM AND SLIDE PROGRAMME in the Ballroom. At 9.30 p.m. details of excursions on Saturday and Sunday afternoons will be given.

9.30 p.m. to midnight Lounges available for informal discussions and refreshments (late licence).

Saturday 28th October

8.45 to 9.15 a.m. Conference Office opens for registrations.

9.20 a.m. Official Opening of Conference in the Ballroom. ADDRESS OF WELCOME by David R. Grant, Esq., Provost of Dunblane.

9.30 a.m. LECTURE, "Ecological Studies of Seabirds," by Dr G. M. Dunnet (Culterty Field Station, Newburgh), followed by discussion.

11 a.m. INTERVAL for coffee and biscuits.

11.30 a.m. LECTURE, "A Preliminary Account of the Effects and Lessons of the Torrey Canyon Disaster," by Dr Duncan Poore (Director General of the Nature Conservancy), followed by discussion.

1 p.m. INTERVAL for lunch.

2 p.m. EXCURSIONS by private cars leaving the Conference Hotel car park. Details will be posted on the Conference notice board.

6 p.m. 31st ANNUAL GENERAL MEETING OF THE CLUB in the Ballroom.

BUSINESS:

(1) Apologies for absence.
(2) Approval of Minutes of 30th Annual General Meeting of the Club held in Dunblane on 22nd October 1966 (see "Scottish Birds" 4: 331).
(3) Report of Council for Session 30.
(4) Approval of Accounts for Session 30.
(5) Appointment of Auditor.
(6) Election of Hon. President. The Council recommends that Sir Arthur B. Duncan be elected an Honorary President of the Club.
(7) Election of new Members of Council. The Council recommends the election of Professor M. F. M. Meiklejohn and T. D. H. Merrie to replace C. K. Mylne and A. J. Smith who are due to retire by rotation.
(8) Consideration of the following proposed amend-

ment to the Constitution (additions in italics) under 3. MEMBERSHIP (e):
"There shall be no entry fees. The Annual Subscription shall be 25s; or 7s 6d in the case of Members who are under 21 years of age, or in the case of University Undergraduates who satisfy the Council of their status as such at the time at which their subscriptions fall due in any year. *The Life Subscription shall be* £50. Married couples shall be eligible for joint Membership at an Annual Subscription of 40s *or a Life Subscription of* £75, and shall enjoy all the usual privileges of Membership with the exception that they shall be entitled to receive only one copy of Scottish Birds (Club Journal). and any other literature circulated by the Club, between them."

(9) Any other competent business.

7.30 for 8 p.m. ANNUAL DINNER in the Diningroom of the Hotel Dunblane (dress informal).

Sunday 29th October

9.30 a.m. PROGRAMME OF FILMS, including a film of the Torrey Canyon.

10.45 a.m. INTERVAL for coffee and biscuits.

11.15 a.m. JOINT MEETING with members of the Royal Society for the Protection of Birds, in the Ballroom. ADDRESS, "Current Developments in Bird Protection" by Peter Conder (Director of the R.S.P.B.), followed by colour films and slides of the third pair of nesting Ospreys, the Snowy Owls, and the "New Reserves" film.

1 p.m. INTERVAL for lunch.

2 p.m. EXCURSIONS by private cars leaving the Conference Hotel car park.

3 p.m. OFFICIAL OPENING by the Right Hon. The Earl of Mansfield of Vane Farm Reserve, Loch Leven, to which all Conference members are cordially invited.

Conference Office

Outwith registration hours the Conference Office will also be open at intervals during the weekend for members to see the exhibits. A wide selection of new books from the S.O.C. Bird Bookshop will be displayed for purchase or orders. R.S.P.B. literature, Christmas cards, garden bird equipment and gramophone records will be on sale, and also a selection of B.T.O. literature and Christmas cards.

Film and Slide Programme

The programme from 8.30 to 9.30 p.m. on Friday evening is intended to give members and guests an opportunity of showing 2" x 2" slides or 16 mm films. These must however be submitted beforehand to the Conference Film Committee, and should be sent, by 13th October at the latest, to the Club Secretary, 21 Regent Terrace, Edinburgh 7. The slides should be titled and sent with brief notes on what will be said about them, to enable the Committee to make a selection and to form a good programme. It will not be possible to show material which has not been received by this date.

INFORMATION

(1) **Hotel Reservations.** All reservations must be made direct. Owing to the shortage of single rooms, members are urged to make arrangements to share a room with a friend.

(2) **Conference Post Card.** It is essential that members intending to be present should complete the enclosed printed post card and send it to the Club Secretary not later than 23rd October. Because of limited seating accommodation, the Council regrets that members may invite only one guest each to the Annual Dinner.

(3) **Registration.** Everyone attending the Conference must register on arrival (10s each) at the Conference Office (for opening times, see Programme). Members attending only the Annual General Meeting do not require to pay the registration fee, which covers morning coffees and incidental expenses.

(4) **Annual Dinner.** Tickets for the Annual Dinner (price 25s inclusive of red or white wine or fruit cup, and of gratuities) should be purchased when registering. Members and guests staying in the Conference Hotel pay for the Annual Dinner in their inclusive hotel account, but must obtain a dinner ticket from the Conference Office as all tickets will be collected at the Annual Dinner. No payments should be made in advance to the office in Edinburgh.

(5) **Other Meals.** Dinner on Friday evening is served in the Conference Hotel from 6.30 to 9 p.m. Non-residents will be able to obtain lunch on Saturday or Sunday by prior arrangement with the Hotel Reception desk.

(6) **Swimming Pool.** The indoor swimming pool in the Conference Hotel will be available during the weekend at no extra charge.

(7) **Excursions.** Members are asked to provide cars if possible and to fill their passenger seats; to avoid congestion in the car park the minimum numbers of cars will be used. The following 1" O.S. maps cover the area: Old Edition 62, 63, 66 and 67; New Edition 53, 54, 55, 60 and 61. Members wishing to go out on their own are particularly asked not to go in advance of led excursions to avoid disturbing the birds.

Hotels in Dunblane

Hotel Dunblane (Hydro) (Tel. 2551). Special Conference charge £7.11.0d (or 75/6 per day) including service charge, bed and all meals (except tea on Saturday afternoon) from Friday dinner to Sunday lunch, after-meal coffee, and the Annual Dinner (with wine or soft drinks). For less than a full day, bed and breakfast is 42/-, lunch 11/6 and dinner 17/6.

Stirling Arms Hotel (Tel. 2156). Bed and Breakfast from 25/-.

Neuk Private Hotel, Doune Road (Tel. 2150). B & B 20/- to 23/-.

Schiehallion Hotel, Doune Road (Tel. 3141). B & B 18/6 to 21/-.

Ardleighton Hotel (near Hotel Dunblane gates) (Tel. 2273). B & B 22/6 to 25/-.

Hotels in Bridge of Allan (3 miles from Dunblane)

Members with cars who have difficulty in getting single rooms in Dunblane should find these two hotels have ample accommodation.

Allan Water Hotel (Tel. 2293). B & B 42/- to 53/6.

Royal Hotel (Tel. 2284). B & B from 39/-.

Prices, except for the Conference Hotel, are provisional and should be confirmed.

SUBSCRIPTIONS, COVENANTS AND BANKER'S ORDERS

Your subscription for the new session is now due and should be sent at once with the enclosed form to the Club Secretary or paid to Branch Secretaries. The winter number of the journal will only be sent to paid-up subscribers.

If you pay income tax at the full rate and have not already signed a seven-year Deed of Covenant, this is the way you can help the Club funds at no extra cost to yourself, as the tax we are allowed to reclaim on a subscription of 25s is nearly 18s. If only 50% of our members signed Covenants the Club would gain an annual income of nearly £600, which could be used to give increased services through the journal and other publications, Conferences and lectures, more reference books for the Library, and in many other ways. May we invite you to use the enclosed form, which should be sent on completion to the Secretary, who will forward a Certificate of Deduction of Tax for signature each year.

A Banker's Order is enclosed for the use of members who find this a more convenient way of paying the annual subscription, and it will also help to lessen the administrative work in the Club office; this should be returned to the Secretary and not to the Bank.

CLUB TIES

The official tie of the Club, which carries the emblem of a small crested tit in white on a dark green, navy or maroon ground, can be purchased from the Club office. As stocks have now been obtained direct from a manufacturer, it has been possible to reduce the price, and the ties will be sold at 17s 6d each in future.

LIBRARY REQUIREMENTS

We publish below a list of certain parts of journals which are lacking from the Reference Library which we would like to acquire in order to complete the runs. Any member who has one or more of these parts to spare is asked to get in touch with the Secretary:

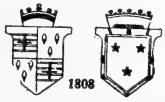
London Bird Report for the years 1937, 1938, 1939 and 1941.

The Sea Swallow (Royal Naval Bird Watching Society). Report for 1953.

Transactions of the Stirling Natural History Society Vol 4 (1881/82); Vols 6-9 (1883/84 to 1886/87); Vol 15 (1892/93); Vol 48 (1925/26); Vol 50 (1927/28); Vol 53 (1930/31); Vol 58 (1935/36) and Vol 60 (1937/38).

Transactions of the Perth Society of Natural Sciences Vol 1 Part 3 (1888/89); Vol 2 Pt 1 (1892/93) and Pt 3 (1894/95); Vol 3 Pt 4 (1901/02); Vol 4 Pt 2 (1904/05); Vol 5 Pt 5 (1912/13) and Appendix Pt 2; Vol 8 Pt 4 (1926/27); Vol 9 Pt 1 (1929/30) and Pt 6 (1935/36) and Vol 10 Pt 1 (1938/43).

Transactions Dumfries and Galloway Natural History Society Vol 33 (Third Series) (1954/55).



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Notice to Contributors

All contributions should be sent to Andrew T. Macmillan, 12 Abinger Gardens, Edinburgh 12. Attention to the following points greatly simplifies production of the journal and is much appreciated.

1. Papers should if possible be typed with double spacing. All contributions should be on one side of the paper only.

2. Topical material for Current Notes should reach the Editors **before the end of March, June, September and December,** at which time they begin to compile this section. All other notes should be sent promptly but important items can be fitted in until a month or so after these dates.

3. Proofs will normally be sent to authors of papers, but not of shorter items. Such proofs should be returned without delay. If alterations are made at this stage it may be necessary to ask the author to bear the cost.

4. Authors of full-length papers who want copies for their own use MUST ASK FOR THESE when returning the proofs. If requested we will supply 25 free copies of the issue in which the paper is published. Reprints can be obtained but a charge will be made for these.

5. Particular care should be taken to avoid mistakes in lists of references and to lay them out in the following way, italics being indicated where appropriate by underlining.
DICK, G. & POTTER, J. 1960. Goshawk in East Stirling. *Scot. Birds* 1:329.
EGGELING, W. J. 1960. *The Isle of May.* Edinburgh and London.

6. English names should follow *The Handbook of British Birds* with the alterations detailed in *British Birds* in January 1953 (46:2-3) and January 1956 (49:5). Initial capitals are used for names of species (*e.g.* Blue Tit, Long-tailed Tit) but not for group names (*e.g.* diving ducks, tits). Scientific names should be used sparingly (see editorial *Scottish Birds* 2:1-3) and follow the 1952 B.O.U. *Check-List of the Birds of Great Britain and Ireland* with the changes recommended in 1956 by the Taxonomic Sub-Committee (*Ibis* 98:158-68), and the 1957 decisions of the International Commission on Zoological Nomenclature (*Ibis* 99:369). When used with the English names they should follow them, underlined to indicate italics, and with no surrounding brackets.

7. Dates should normally be in the form "1st January 1962", with no commas round the year. Old fashioned conventions should be avoided—*e.g.* use Arabic numerals rather than Roman, and avoid unnecessary full stops after abbreviations such as "Dr" and "St".

8. Tables must be designed to fit into the page, preferably not sideways, and be self-explanatory.

9. Headings and sub-headings should not be underlined as this may lead the printer to use the wrong type.

10. Illustrations of any kind are welcomed. Drawings and figures should be up to twice the size they will finally appear, and on separate sheets from the text. They should be in Indian ink on good quality paper, with neat lettering by a skilled draughtsman. Photographs should either have a Scottish interest or illustrate contributions. They should be sharp and clear, with good contrast, and preferably large glossy prints.

THE SCOTTISH ORNITHOLOGISTS' CLUB

THE Scottish Ornithologists' Club was founded in 1936 and membership is open to all interested in Scottish ornithology. Meetings are held during the winter months in Aberdeen, Ayr, Dumfries, Dundee, Edinburgh, Glasgow, St Andrews and elsewhere at which lectures by prominent ornithologists are given and films exhibited. Excursions are organised in the summer to places of ornithological interest.

The aims and objects of the Club are to (a) encourage and direct the study of Scottish Ornithology in all its branches; (b) co-ordinate the efforts of Scottish Ornithologists and encourage co-operation between field and indoor worker; (c) encourage ornithological research in Scotland in co-operation with other organisations; (d) hold meetings at centres to be arranged at which Lectures are given, films exhibited, and discussions held; and (e) publish or arrange for the publication of statistics and information with regard to Scottish ornithology.

There are no entry fees for Membership. The Annual subscription is 25/-; or 7/6 in the case of Members under twenty-one years of age or in the case of University undergraduates who satisfy the Council of their status as such at the time at which their subscriptions fall due in any year. Joint membership is available to married couples at an annual subscription of 40/-. "Scottish Birds" is issued free to members but Joint members will receive only one copy between them.

The affairs of the Club are controlled by a Council composed of the Hon. Presidents, the President, the Vice-President, the Hon. Treasurer, the Editor and Business Editor of "Scottish Birds", the Hon. Treasurer of the House Fabric Fund, one Representative of each Branch Committee appointed annually by the Branch, and ten other Members of the Club elected at an Annual General Meeting. Two of the last named retire annually by rotation and shall not be eligible for re-election for one year.

A Scottish Bird Records' Committee, appointed by the Council, produce an annual Report on "Ornithological Changes in Scotland."

An official tie in dark green, navy or maroon terylene, embroidered with small crested tits in white, can be obtained by Members only from the Club Secretary, at a cost of 17s 6d. A brooch in silver and blue is also available to Members, price 3s 6d, from the Club Secretary or from Hon. Branch Secretaries.

The Club-room and Library at 21 Regent Terrace, Edinburgh 7, will be available to Members during office hours, and on Wednesday evenings from 7 to 10 p.m. during the winter months. Members may use the Reference Library, and there is a small duplicate section, consisting of standard reference books and important journals, which can be lent to students and others wishing to read a particular subject. A lending section for junior Members, which is shared with the Young Ornithologists' Club, is also available.

Forms of application for Membership, copy of the Club Constitution, and other literature is obtainable from the Club Secretary, Mrs George Waterston, Scottish Centre for Ornithology and Bird Protection, 21 Regent Terrace, Edinburgh 7. (Tel. Waverley 6042).

The Scottish Ornithologists' Club Tie

Illustrated is the official Club Tie, of which R. W. Forsyth's are the sole suppliers. The 'Terylene' tie is in blue, green or maroon, with the bird motif in silver.

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The London Natural History Society

This Society, which covers all branches of natural history, has a strong ornithological section. Lectures, film shows, practical demonstrations and field meetings are arranged and research work is undertaken, most, though not all, of these activities taking place within the Society's area, that is within a 20 mile radius of St Paul's.

Members of this Society help run the independent Dungeness Bird Observatory, which provides experience in bird ringing, studying birds in the hand and migration watching.

The London Bird Report, compiled by the Ornithological Section and published annually, includes papers, facts and figures of special interest to bird watchers in London.

Further details can be had from the General Secretary:

MRS L M. P. SMALL,
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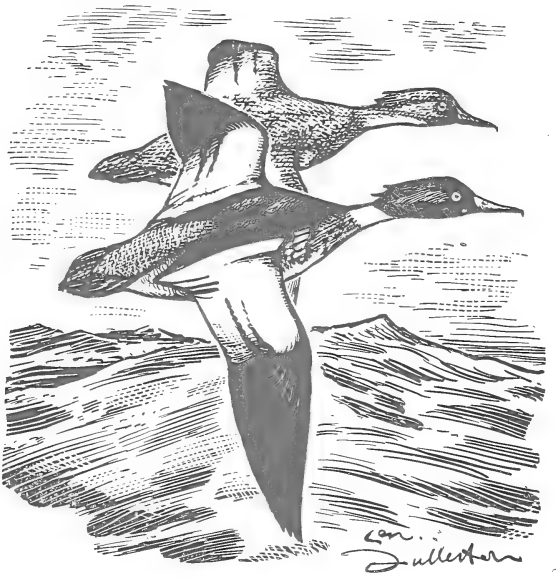

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The Scottish Ornithologists' Club

Vol. 4 No. 8 *Winter 1967*

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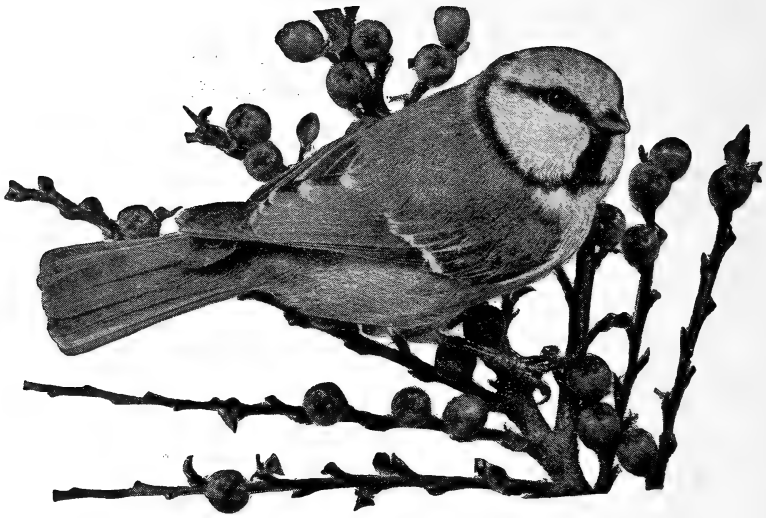

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THE JOURNAL OF THE SCOTTISH ORNITHOLOGISTS' CLUB

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Edited by Andrew T. Macmillan, 12 Abinger Gardens, Edinburgh 12.
Assisted by D. G. Andrew, T. C. Smout and P. J. B. Slater.
Business Editor T. C. Smout, 93 Warrender Park Road, Edinburgh **9.**

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Scottish Birds

THE JOURNAL OF THE SCOTTISH ORNITHOLOGISTS' CLUB

Vol. 4 No. 8 **Winter 1967**

Edited by A. T. Macmillan with the assistance of D. G. Andrew, T. C. Smout and P. J. B. Slater. Business Editor, T. C. Smout
Cover Design (Red-breasted Mergansers) by Len Fullerton.

Editorial

Scottish Bird Report. Current Notes in this issue of *Scottish Birds* embrace some 600 records, of 148 species, contributed by 143 observers; these are the published records—a fraction of those submitted.

A lot more correspondence, research and editorial time per page is involved in producing this section than for any other. Therefore one wants to be sure that the result justifies the effort, and that one is not just publishing a mass of unclassified information in a form that may largely deprive it of permanent value. Such a fear is certainly exaggerated, but there are other snags to Current Notes besides the heavy burden of producing them regularly on time.

Most of the correspondence is handled by the editor, but for several years Peter Slater has compiled Current Notes, sorting out what is worth including and why, and putting it in order for the printer, and always working against time. This may sound a relatively straightforward task, but in fact one can spend half an hour checking the literature on a single point, only to decide that the record is not worth using. Peter Slater can no longer afford the time for this, as he has to prepare a thesis for his doctorate. None of the other editors is able to take on this most demanding job, and it would be hard to find anyone to do it so well as at present. Some change is unavoidable, and the time seems ripe for a new approach to the great volume of this type of material. This editorial outlines the plan and the thinking behind it.

There are several objections to publishing so much in the form of quarterly Current Notes. It is true that many people like the relative topicality and feeling of involvement with this section, and it stimulates them to send in notes. But without an annual summary it is becoming progressively more difficult to make use of the valuable information published in it. Also, many of the records are not so much current news as items which ought to be noted down for the future.

They go in this section because there is nowhere else, but they tend to hide reports of what really is current, except from those who are willing to read right through. At times, too, Current Notes can be actually misleading, because cover is patchy and varies from quarter to quarter, and because it is difficult for the editors always to judge the true interest of casual notes sent by visitors to areas with which they are not familiar.

To meet all these points there will in future be an annual Scottish Bird Report, gathering together records of both common and rare birds, published and unpublished; Current Notes in each issue of *Scottish Birds* will be abbreviated to a comparatively short news column, and the Scottish Bird Report will form a major part of one of the quarterly issues.

With the large number of active contributors to *Scottish Birds*, good cover is possible for much of the country. It is hoped that the new Scottish Bird Report will stimulate people to think more about changes in status of common birds than about rarities, and that it will show where information is lacking. The report should provide useful comparisons from year to year, and in a readily accessible form.

It is impossible to get really adequate cover by the present method of people sending in notes if they feel like it. A more systematic gathering of records with the help of active and experienced local birdwatchers in all areas seems essential. The Council of the Scottish Ornithologists' Club has therefore approved the appointment of Local Recorders throughout Scotland, and a list of those appointed is given below. Areas vary greatly in size, but have been determined as much by the present organisation and distribution of birdwatchers in Scotland as by the natural faunal divisions of the country.

Everything continues unchanged until the end of 1967, and material for the present style of Current Notes should be sent to the editor at the end of December. The new arrangements start on 1st January 1968, and the first Scottish Bird Report will cover 1968.

Ordinary records from January onwards should be sent direct to the appropriate local recorder, not to the editor, but the editor will forward them for anyone who is not sure where to send them. The idea is that each local recorder will prepare a summary for his area at the end of the year and send it in by the end of the following January. It is hoped that if all goes according to plan the Scottish Bird Report will appear in the summer issue of *Scottish Birds*. Cooperation from everyone, especially in sending their notes on time, will be essential if this is to be achieved and the best use

made of the records.

Many observers will arrange to give their notes to their local recorders regularly throughout the year. So that the local recorders may get started on their reports in good time, it is particularly asked that any other records for the first ten months of the year, January-October 1968, should be sent to them as early as possible in November 1968. Records for November and December (usually quiet months) should be sent as early as possible in January 1969, and certainly by the end of the first week of the month.

Material will be needed also for the new, brief Current Notes in *Scottish Birds*. Anything that could be of interest for this section should be reported to local recorders by the end of March, June, September and December, so that they may send in short reports on what has been happening in their areas.

Anything that might be suitable for a Short Note in *Scottish Birds* should be sent at once, either to the editor or to the local recorder.

Rarities should be reported at once to the local recorder, and full notes prepared for him to forward. We have been asked to say what should be done by anyone who discovers a rare bird. The first and most important thing is to make full and detailed notes in the field, even if you know the bird well and have no doubts about it; the next most important step, especially if you are alone or not yet known as an expert observer, is to get other competent birdwatchers alerted with all speed to come and look for the bird.

We believe that the proposed Scottish Bird Report is an important step forward. With the help of all active Scottish ornithologists it can be a really interesting, useful summary of all that has been happening in Scotland year by year. We appeal to everyone to give their fullest support to the local recorders, and to help to make the report as complete and informative as possible.

List of Local Recorders

Shetland (except Fair Isle). R. J. Tulloch, Reafirth, Mid Yell, Shetland.
Fair Isle. R. H. Dennis, Bird Observatory, Fair Isle, Shetland.
Orkney. E. Balfour, Isbister House, Rendall, Orkney.
St Kilda. Please write direct to editor.
Outer Hebrides (except St Kilda). W. A. J. Cunningham, Aros, 10 Barony Square, Stornoway, Isle of Lewis.
Caithness. D. M. Stark, 2 Harland Road, Castletown, Thurso, Caithness.
Sutherland, Ross-shire (except Black Isle). Dr I. D. Pennie, The

Hollies, Golspie, Sutherland.

Inverness-shire (within 18 miles of Inverness), Ross-shire (Black Isle only). Dr Maeve Rusk, Arniston, 51 Old Edinburgh Road, Inverness.

Inverness-shire (mainland more than 18 miles from Inverness). Hon. D. N. Weir, English Charlie's, Rothiemurchus, Aviemore, Inverness-shire.

Nairnshire, Morayshire, Banffshire. R. Hewson, 170 Mid Street, Keith, Banffshire.

Dee faunal area. Joint recorders: N. Picozzi, Unit of Grouse and Moorland Ecology, Blackhall, Banchory, Kincardineshire; W. Murray, Culterty Field Station, Newburgh, Aberdeenshire.

South Kincardineshire, Angus. G. M. Crighton, 23 Church Street, Brechin, Angus.

Perthshire. Miss V. M. Thom, 19 Braeside Gardens, Perth.

Kinross-shire. J. H. Swan, Vane Farm Reserve, Kinross.

Isle of May. Miss N. J. Gordon, Nature Conservancy, 12 Hope Terrace, Edinburgh 9.

Fife (east of A90). D. W. Oliver, 4 Lawview Cottages, Abercrombie, St Monance, Fife.

Fife (west of A90), Clackmannanshire, East Stirlingshire. T. D. H. Merrie, West Faerwood, Stirling Road, Dollar, Clackmannanshire.

West Lothian. Dr T. C. Smout, 93 Warrender Park Road, Edinburgh 9.

Forth islands (except May), Midlothian. R. W. J. Smith, 33 Hunter Terrace, Loanhead, Midlothian.

East Lothian, Berwickshire. K. S. Macgregor, 16 Merchiston Avenue, Edinburgh 10.

Peeblesshire, Roxburghshire, Selkirkshire. A. J. Smith, Glenview, Selkirk.

Clyde faunal area, North Argyllshire, Skye, Inner Hebrides. Prof. M. F. M. Meiklejohn, 16 Athole Gardens, Glasgow W.2.

Dumfriesshire. J. G. Young, Benvannoch, Glencaple, Dumfriesshire.

Kirkcudbrightshire, Wigtownshire. A. D. Watson, Barone, Dalry, Castle Douglas, Kirkcudbrightshire.

Faunal areas and divisions are shown on the map in 'The Birds of Scotland.' It will be seen that the Hebrides and Skye are treated separately from the rest of the administrative counties in which they lie.

Agricultural pesticides. The sixth report of the Joint Committee of the B.T.O. and the R.S.P.B. on Toxic Chemicals, in collaboration with the Game Research Association, covers the period from July 1964 to December 1966. Residues of persistent organochlorine chemicals are now found through-

out the environment and in all parts of the country, though their significance cannot always be assessed. Breeding success of the Golden Eagle remains low in most areas, probably because of residues of dieldrin sheep dips acquired from eating sheep carrion. The Committee strongly argues that existing restrictions on the use of pesticides such as aldrin and dieldrin must continue.

The Rarities Committee. Though the *British Birds* Rarities Committee may seem remote and inexorable to some, Scotland is well represented on it. Of the nine members at the last count, Professor M. F. M. Meiklejohn is very much a Scottish Ornithologist and both P. E. Davis and D. I. M. Wallace have strong Scottish connections. Now R. H. Dennis has accepted an invitation to join the committee, thus demonstrating the quality both of Fair Isle's birds and of its wardens, by completing the hat trick of the latter to serve on the committee.

Waxwings. Waxwings are with us again; details of locality, date, number of birds, and food taken, if any, should be sent to M. J. Everett, 21 Regent Terrace, Edinburgh 7.

Irish Bird of Prey Conference. A one-day conference with the theme "The Peregrine Falcon in Ireland" has been arranged by the Bird of Prey Research Centre (All Ireland) at the Great Northern Hotel, Rostrevor, Co. Down, on Saturday 20th January 1968. Speakers are John Temple-Lang, John W. Greaves, Ian Prestt and Peter Olney, and there will be ample discussion time. Details from Ulster Museum, Stranmillis, Belfast.

Current literature. Recent articles of special interest to Scottish ornithologists have included:

Changes in farming practice. A. R. Wannop and A. Macdonald 1967. *Scot. Wildlife Trust Newsletter* 7: 13-16. Useful review of effects on wildlife.

Puffinosis in Fulmars in Orkney and Shetland. J. W. Macdonald, D. A. McMartin, K. G. Walker, M. Carrins and R. H. Dennis, 1967. *Brit. Birds* 60: 356-360.

A survey of the ducks breeding at Loch Leven in 1966. H. Boyd and C. R. G. Campbell, 1967. *Ann. Rep. Wildfowl Trust* 18: 36-42. Seven species bred and 705 nests were found.

Golden Eagle Survey Panel. In *The Sixth Report of the Joint Committee of the B.T.O. and the R.S.P.B. on Toxic Chemicals*, S. Cramp and P. J. S. Olney, 1967. Two-page report, with four interesting tables of breeding statistics.

Winter territory in the Stonechat. J. S. Phillips, 1967. *Bird Study* 14: 191-192. Ayrshire study.

Waxwings in Scotland, 1965/66 and 1966/67

MICHAEL J. EVERETT

(Plates 53-54)

Introduction

In recent winters, Waxwing invasions have become all but commonplace events, leading Macmillan (1964) to suggest that "the subject has become almost a bore" to some observers. Scottish records for invasions over the last thirty years have been dealt with in detail by Baxter & Rintoul (1937, 1947) and by Macmillan (1959, 1960, 1962, 1964); on a broader scale, the extraordinary series of successive invasions in the winters of 1956/57 to 1959/60 has been discussed in detail, with reference to earlier invasions and to population fluctuation and winter food-supply, by Cornwallis (1961). These papers provide extensive background to the present report. Much additional information on the factors influencing bird irruptions can be found in Svärdson (1957), where Waxwings are among several species considered. The invasion which occurred during the winter of 1965/66 will be discussed in greater detail and on a wider basis in *British Birds* in due course; meanwhile, this report aims to describe briefly the irruption as a whole, and to deal more extensively with the arrival and movements of Waxwings in Scotland.

I was very kindly given an unpublished summary of events in Europe and elsewhere in Britain that had been compiled by Dennis Townsend, and the following brief account is based on this.

Breeding numbers were more or less normal in the U.S.S.R., but exceptional numbers of Waxwings nested in northern Sweden and Swedish Lapland. From the last week of September large numbers of birds began to move through Finland. Numbers were more or less normal, but the early dates and speed of the movement were most unusual; passage there was over by mid October. By this time, a mass invasion of northwest Russia had also taken place. By the end of October Waxwings were being reported in almost every European country; particularly large numbers are mentioned in Poland and, by inference, in Norway. Later, "fantastic numbers" were recorded all over France, a "huge invasion" had taken place in Hungary, and "enormous masses" had reached Czechoslovakia. There were several records from north or northeast Spain, and a bird taken on the west coast of Portugal was the first recorded in that country. Ringing recoveries of birds trapped in Hungary, U.S.S.R., Norway and Finland show that some birds reached Italy, Jugoslavia, and even European Turkey. Far to the northwest, Waxwings

reached Iceland by the end of October, with more following in November.

From 9th October Waxwings began to appear on the east coast of England in flocks of varying sizes, with at least one flock of 300 in north Norfolk by 20th. By the end of the month they were present in sizeable parties in all the eastern counties as far south as Kent, and a westward spread was evident, with records from Westmorland, Lancashire and Caernarvonshire. In the first half of November the east coast flocks became more scattered, but at the end of the month they were still present in 46 counties in England and Wales, and had reached Devon and Cornwall in the extreme southwest. Throughout December and January, birds were still widespread but were mostly in smaller flocks.

Numbers were well down in February, and isolated records in March may indicate return passage. Several stragglers were reported during April, but there were no May records.

The 1965/66 invasion

Most of the foregoing information was not received until some time after the collection of Scottish records had started; it underlines two basic assumptions made by observers in Scotland in October—firstly, that Waxwings were arriving unusually early, and secondly that they were present in unprecedented numbers. Waxwings normally arrive in Scotland at the end of October and in early November, but in 1965 the first wave had reached Argyll by mid October, when the main invasion was under way along the eastern seaboard. In the 1946/47 invasion, which is considered a major one, Baxter and Rintoul estimated that 6000 birds reached Scotland; over 1500 records received for 1965/66 show that, even allowing for some duplication of reports, over 10,000 birds were involved.

This summary is based on records sent in by S.O.C. members and the general public from all over Scotland; many reports were spontaneous, but the majority came as a result of repeated requests for information in both local and national newspapers, in this journal, and, indirectly, in other periodicals and on radio. Several very early and generally unlikely records mentioned here have been carefully checked with the observers. Waxwings received a great deal of publicity, and it is pleasing to record here the tremendous interest in them shown by the non-birdwatching public. There seems to be no very obvious peak in the number of reports received to link with any single appeal, most reports coming in when other sources indicated that maximum numbers of birds were present. Table 1 shows the distribution of reports over the faunal areas of Scotland, and the estimated

Table 1. Number of reports of Waxwings from each faunal area of Scotland in winter 1965/66, and estimated number of birds involved

Faunal area	Reports	Birds
Northern Isles	46	770
North Coast	51	500
Moray	217	2155
Dee	54	455
Tay	219	1270
Forth	339	2000
Tweed	61	410
Outer Hebrides	26	110
Northwest Highlands	52	435
Argyll/Inner Hebrides	117	1235
Clyde	299	2510
Solway	63	695
	1544	12545

number of birds these involved. Very litle bias is evident in the table, with good cover in all areas.

The first 13 Waxwings to be sighted appeared at Strontian, Morvern, Argyll, on the exceptionally early date of 22nd September—just before the main passage through Finland started; they remained in the area for about a month. They were followed by birds which appeared in Argyll several days before arrivals were noted on the east coast: 21 were seen on Eilean Mhor, Loch Keil, in the first week of October; there were at least four in the Lochgilphead area on 10th October, and at least 14 there the following day; "a lot" arrived at Eredine, Loch Awe; four were seen at Dalmally; and 20 appeared at Kilmelford, Oban. By 15th October well over 100 birds were scattered across Argyll, and it was not until the end of the month that any noticeable increases occurred—by which time the influx was obvious in many other areas.

Quite apart from the very early appearance of this first small wave of birds, the fact that they were first seen well to the southwest is both unusual and interesting. It seems improbable that scattered small parties could arrive via the east coast and not be noticed somewhere *en route* to Argyll, and it looks as if they did not in fact land until they had crossed a substantial section of the mainland. The records suggest that these birds did not move about very much after their arrival, although some 20 reached Jura on 23rd October.

Meanwhile the main arrivals of Waxwings were reported all along the eastern seaboard, from Shetland south to Berwickshire. Data from Shetland are rather incomplete, but the earliest record is of a single bird on Fetlar on 17th October; the main arrivals in the islands were from 20th onwards, with flocks widely scattered in many areas. A similar position obtained in Orkney, although the first bird was seen in Kirk-

wall on 11th. On Fair Isle a continuous small passage was noted from 16th, with a maximum of 30 birds on 17th.

On the northern mainland the first Caithness date is 17th October, when 19 Waxwings were seen at Dunbeath; thereafter they were well distributed in small numbers, and 70 were seen in Thurso on 23rd. In northern Sutherland there were 60 birds at Bettyhill on 28th, and 80 at Armadale next day. Further west, nine birds reached Tongue on 14th, and the first bird reached Lewis on 20th when one was seen in Stornoway. Another was found dead at Ness around this time. It was suggested that these birds had reached the northwestern extremities of Scotland by moving westwards along the north coast, but it seems more likely that they arrived direct from Shetland or Orkney, following a roughly southwest course; a record of 20 Waxwings on North Rona on 24th October seems to lend weight to this idea.

To return to the east coast—from mid October there was a steady influx involving many hundreds of birds, from southeast Sutherland to the Tweed, with especially large numbers reported in the Moray, Tay and Forth faunal areas. The earliest dates were: 15th October—one at Burnmouth, Berwickshire; 16th October—one at Cleeve, Perth, and one near Banchory, Kincardineshire; 17th October—two at Portmahomack, E. Ross, and seven flying north over the Isle of May; 18th October—"some" at Brora, Sutherland; and 19th October—12 near Crathie, Aberdeenshire, three at St Andrews, and two at Liberton, Edinburgh.

By the end of October parties of Waxwings were being seen well inland and had penetrated to most areas in the west and southwest. Early records in the northwest include 14 at Loch Laxford, Sutherland, from 16th October, and a single bird at Droman, near Kinlochbervie, Sutherland, on 24th. The earliest date for Wester Ross is during the week ending 22nd October, when 12 birds were seen in Ullapool. On 18th a single bird appeared on Isle Ornsay, Sleat, and by 27th 12 were present there. The first to reach Skye itself were 35 birds seen at Dunvegan on 31st. The first of a small party to reach Rhum arrived at Kinloch on 23rd. There were good numbers of Waxwings in Stornoway by the end of October, while further south a single bird arrived in South Uist on 31st. Most parties seen in western areas towards the end of October were small, but 200 were seen at Arisaig from 20th to 31st, and over 200 had arrived in the Fort William area by 31st. Fig. 1 shows the numbers and distribution of Waxwings in Scotland during October.

In November arrivals continued much as they had in the latter half of October, and by the end of the month there were very few areas where Waxwings had not put in an ap-

FIG 1. Reports of Waxwings in October 1965. Note that in figs. 1-4 a random pattern of dots has been used for Shetland and Orkney where complete details are lacking.

FIG. 2. Reports of Waxwings in November 1965. See note to fig. 1.

pearance either in strength or in small numbers. Two hundred passed through Fair Isle on 1st, and between 23rd October and 3rd November at least 120 had gone through Speyside. Further outlying areas were reached—Mull on 1st and Islay on 5th. The main brunt of the invasion seems to have hit Scotland in the area from Moray southwards, although considerable numbers were recorded in areas further north well into November.

Several flocks of over 50 birds were reported in November, including 75 at Killearn, Stirlingshire, by 13th. Larger flocks were seen at Inveraray and in Aberdeenshire, and there was an unusual record of 100 or so resting in a field at Rothiemurchus, on Speyside, on 16th or 17th. The large flock at Arisaig disappeared, and numbers at Fort William dropped to about 75 birds by 13th.

The most striking feature of the invasion during November was an impressive build-up of birds in the southwest, which took place while others were still arriving in the east. This build-up was under way by the end of October, but becomes more obvious when the figures for the whole of that month are compared with those for November (see table 2). An exodus from the southwest took place in December, by which time Waxwings were being seen in some numbers in Ireland. Fig. 2 shows the numbers and distribution of Waxwings in Scotland during November.

In December arrivals of Waxwings slackened off considerably, and reports received indicate a fall in numbers in all faunal areas; good numbers however remained in the Forth area (although there could be some bias towards such a well watched area). A late wave boosted totals for the Moray area considerably; all told, between 500 and 600 birds were seen between Forres and Findhorn Bay on 12th December. These had all moved on by 18th, perhaps sooner. There were no December records from the Northern Isles, North Coast or Northwest Highlands. Elsewhere birds were apparently moving about at random, but many individuals or small parties showed signs of settling as winter residents. For example, a Waxwing remained in a garden at Clarkston, Renfrewshire, feeding on apples, for six weeks. Fig. 3 shows the numbers and distribution of Waxwings in Scotland during December.

From January to March there was no suggestion of any further influx of birds; no reports were received from the Northern Isles, North Coast, Outer Hebrides, Northwest Highlands, Argyll or the Inner Hebrides. Numbers of wintering birds were small in most areas, mostly falling by the end of March. Nearly all birds had gone by April, and figures for that month are perhaps predictable from the March totals. It is difficult to be sure if March and April records indicate

FIG. 3. Reports of Waxwings in December 1965. See note to fig. 1.

Table 2. Estimated monthly total of Waxwings in each faunal area of Scotland in 1965/66

	Sept	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May
Northern Isles		560	610						3
North Coast		500	40						
Moray		740	900	685	85	35	11	6	1
Dee		145	290	25	4	13	9	7	
Tay		460	655	75	50	60	38	18	
Forth		615	700	420	200	80	85	51	7
Tweed		230	185	60	15	8			
Outer Hebrides		110	25	5					1
NW Highlands		290	180						
Argyll/ I. Heb.	13	685	675	2					
Clyde		410	1800	230	45	30	18		
Solway		60	500	30	1	3	1		
	13	4805	6560	1532	400	229	162	82	12

a return passage, but a local build-up in west Edinburgh in this period suggested that this was happening; however, the numbers in table 2 suggest that any movement was very small—and pose the question of where all the thousands of Waxwings which came through earlier had gone. An interesting number of stragglers appeared in May; these are listed in table 3.

Table 3. Records of Waxwings in Scotland in May 1966

Foula, Shetland	1 on 6th
Fair Isle	1 on 3rd, 1 on 5th
Dornoch, Sutherland	1 on 1st (from 22nd April)
Munlochy, Black Isle	1 on 4th
Edinburgh	1 from 1st to 3rd
Near Haddington	1 from c.1st to 24th
Tyninghame, E. Lothian	4 on 1st
Stornoway	1 on 8th

Few really large flocks of Waxwings were recorded during the 1965/66 invasion. Flocks of 100 or more are listed in table 4.

Table 4. Flocks of 100 or more Waxwings in Scotland in 1965/66

c. 200	Passing through Fair Isle	1st November
c. 200	Fort William area	Late Oct to early Nov
c. 200	Arisaig	20th-31st October
c. 150	Foot of Gairn, Aberdeenshire	1st-4th November
100+	Rothiemurchus, Aviemore	16th or 17th November
100+	Kingoodie, Perthshire	6th November
100+	Crarae, Inveraray	Late Oct to early Nov

The 1966/67 invasion

Predictably perhaps, Waxwings re-appeared in Scotland during the winter of 1966/67, although this time numbers were very much smaller and the records were very scattered. I again sought information from many sources, and managed to build a reasonable picture of this more normal-sized irruption; however, perhaps the subject really had become a bore by this time, and I expect that more birds were actually present than the following summary indicates. Certainly as far as the extreme north is concerned records are few.

As in 1965/66, the invasion began early. The first Waxwing reported was from Yell, Shetland, on 9th October. Birds were seen in Unst and on Fair Isle the following day, and by the middle of the month there were small parties throughout Shetland (mostly 6-10 birds but sometimes 20); on Fair Isle single birds were noted on four dates later in October, with two birds on three dates. The position in Orkney was presumably much the same, although no reports were received to confirm this suspicion. A single bird appeared on Foula on 19th October. On the mainland, "scores" of birds had arrived at Tongue, Sutherland, by 18th October, small numbers appeared in Caithness from 15th, and in the Moray Basin birds were seen at Evanton and Muir of Ord (30) on 22nd and at Gordonstoun on 20th. A single Waxwing reached Ullapool in the west around 25th October, and a few days later small numbers arrived in Cullen and Banff. In the Spey valley two were seen at Coylumbridge on 26th. Small groups were reported from Aberdeenshire from 21st (Aberdeen), including five at Braemar on 24th.

Further south on the eastern side of the country about a dozen birds arrived in Dundee in "early October" and within ten days the flock had grown to 30; three reached Invergowrie on 26th, and four days later 15 were present. Three small parties appeared well inland in Perthshire on 29th and 30th. Surprisingly, only one report came in from Fife, of a single bird in Kirkcaldy on 29th October. On the other side of the Forth, however, the first birds were seen in Edinburgh on 26th and at Gullane the following day; the earliest reports in this area were of six at Dirleton on 21st, and 12 at Longniddry on 25th. Five Waxwings were seen at Eyemouth, Berwickshire, on 28th, and two records were received from places in Selkirk around the same date. One bird arrived at Carluke, Lanarkshire, on 27th October, while another turned up outside Glasgow University the following day.

Once again some Waxwings made an early appearance in Argyll: 12 were at Benderloch on 20th October, and at least 40 had arrived in Inveraray on 30th. Six appeared at the Point of Knap the next day. The first Lewis bird was at Gisla

on 16th, and seven were in Stornoway ten days later. A lone straggler reached the most unlikely place of all for a Waxwing, St Kilda, on 19th October.

November saw a build-up of numbers throughout Scotland, as shown in table 5. Stragglers remained in Shetland until the end of the month, while on Fair Isle singles were seen on 4th, 5th and 20th, and six came through on 23rd. The last of the Caithness birds was seen on 25th. Only five November reports were received from Ross-shire, but among these were 36 (in two groups) at Muir or Ord on 6th, and, in the west, over 50 in Ullapool from 20th. Small numbers were present in Stornoway for much of November, and in Skye 15 were seen at Portree on 6th, and one was there on 12th. Parties of varying sizes were seen in central Scotland on various dates, the largest being 20 at Gordonstoun on 9th and 30 nearby on 12th, 22 at Turriff, Aberdeenshire, on "a late November date," and about 50 near Elgin on 6th. By the third week of the month at least 20 individuals were present in Inverness.

Small numbers were reported in an area from Helensburgh in the west to Dundee in the east, while about 75 birds in all were present in Fife, mainly on the coast, including 25 at Newburgh on 16th. Small groups were present in East Lothian, Berwick, Selkirk and Roxburgh, the biggest being 17 at one of the favourite Gullane haunts on 12th. At least 90 birds were in and around Edinburgh during November, the largest party being 17 at Donaldson's School on 14th. Several reports were received from Lanarkshire, Renfrewshire and Ayrshire, the biggest flock being of 25 birds in Kilmarnock in "mid November." At least 35 Waxwings were seen in Glasgow in November. The scattered groups in Argyll totalled about 135 birds, with 40 still present in Inveraray until 11th—perhaps longer—being the largest single gathering. Only three records came in from the south of Scotland: a single bird was seen in Dumfries on 7th or 8th; 53 were at Rockcliffe, Kirkcudbrightshire, on 2nd; and two were at West Freugh, Wigtownshire, on 1st. Fig. 4 shows the numbers and distribution of Waxwings in Scotland during October and November.

Numbers appeared to dwindle considerably in December (see table 5); ten birds were seen in Dornoch on 28th, and small numbers were still present in Inverness. Odd small groups were reported in Banff, Elgin and Forres and in Kingoodie, Perthshire, on various dates. Between 12 and 15 Waxwings remained in Dundee until 19th December, while 27 and 15 were reported in Edinburgh and Glasgow respectively. Nine records of singles or small parties came from Fife and Berwickshire. During January nine reports were received, small numbers of birds being seen in Inverness, Forres, Aber-

FIG. 4. Reports of Waxwings in October and November 1966. See note to fig. 1.

Table 5. Estimated monthly total of Waxwings reported in each faunal area of Scotland in 1966/67

	Oct	Nov	Dec	Jan	Feb	Mar
Northern Isles	100?	50?				
North Coast	75?	20?				
Moray	65	200	45	9	11	1
Dee	11	42		10	8	
Tay	60	105	30	13	6	9
Forth	80	155	40	3	1	6
Tweed	15	50				
Outer Hebrides	10	30?				
N.W. Highlands	1	60				
Argyll/I. Heb.	60	135				
Clyde	2	100	15			5
Solway		56				
	479	1003	130	35	26	21

deen, St Fillans, St Andrews and Edinburgh. Much the same pattern, with nearly as many birds involved, emerged in February, a single bird in Glasgow on 18th being the exception. March produced six records: singles at Blanefield, Stirlingshire, on 4th, Banff on 3rd, and Lundin Links, Fife, on 30th (the latest 1967 record); four at Bearsden, Glasgow, on 13th; five in Kirkcaldy on 1st and 2nd; and nine in Perth on 19th.

Food of Waxwings, 1965/66

During the huge 1965/66 invasion, large numbers of observers reported on the food of various Waxwing flocks (see table 6). The table shows the birds' known liking for cotoneaster, the abundance of which probably accounts for the great number of records from urban and suburban areas. Considering the reliance migrating Waxwings place on rowans in Fenno-Scandia there are surprisingly few records of the berries of this tree being eaten during the invasion. Hips and haws are a favourite food in more open country, but Waxwings clearly eat a great variety of fruits—and other interesting items as well, including such unlikely fare as bread and cake (14 records—6 of them in April, when natural food was scarcer), bananas, grapes, oranges and carrots, put out for them by enterprising garden-ornithologists. Birds were recorded "flycatching" on six occasions. Three records each were received for the fruits of juniper and pyracantha; two each for Prunus, privet, ribes and "unidentified seeds"; and the following were recorded once: ash, willow and elm buds, primrose flowers (April), mulberry, fuchsia, ash, alder, broom, raspberry and potatoes. Several observers reported preference for one food over another when two or more species were available, but the records were either inconsistent with one another or even in direct contradiction—so nothing

Table 6. Fruit eaten by Waxwings in Scotland in 1965/66—number of records per month excluding items recorded less than ten times (see text)

	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Total
Cotoneaster	88	240	32	22	6	2			390
Haws	24	69	7	4	1	1			106
Berberis	22	56	7	3					88
Hips	11	38	11	7	8	5			80
Apples	8	30	11	7	6	4	1	1	68
Yew	13	32							45
Honeysuckle	21	15	1						37
Elder	9	22	1						32
Rowan/Sorbus	14	6	4	1		1			26
Bramble	11	11							22
Pears	6	12				1	1		20
Holly		7			1		1	2	11
	227	538	74	44	22	14	3	3	925

much was gleaned on food preference. One observer pointed out that a certain well-known brand of bird-food was not attractive to Waxwings.

Mortality

During any Waxwing invasion, observers are struck by the large numbers of Waxwings found dead. From the records received over the course of two winters it seems that the main cause of death is the birds' curious habit of flying into stationary objects—not only glass windows, but much more unlikely things, such as a crane on a South Uist jetty. Cats certainly catch a lot of Waxwings; the birds are often very confiding, and even rather sluggish, and doubtless fall easy prey to prowling felines. Only one of the birds picked up dead (in Oban during the second week of December 1965) bore a ring; it had been trapped and ringed on 5th October 1965 at Raksila, near Oulu, Finland.

Not all the birds which were picked up after crashing into such things as windows died; several were restored to full health in captivity and later released. One correspondent related how her Waxwing became so tame that it rode about the house perched on her dog's head.

Acknowledgments

Space has not permitted mention of every individual record received, nor of the names of the 1200 or so observers who sent me these records; I hope they will accept my grateful thanks here. I must particularly thank Mrs Ida Rainier, who eased my labours by collecting all the Argyll records in both invasions; Dennis Townsend for kindly preparing the summary which I used in writing the first section of this report; and, for their help and advice on various matters, Dick Cornwallis, Andrew Macmillan, Peter Olney and George Waterston.

Summary

The strikingly large Waxwing invasion of the 1965/66 winter involved much of Europe, and the occurrence of the birds in various countries and in England is briefly described. Waxwings reached Scotland earlier than usual and in unprecedented numbers; over 1500 records were received, involving well over 10,000 birds.

Details are given of the arrival and spread of birds in Scotland during October, November and December, when Waxwings were reported from almost all areas. There was a very early arrival of birds in Argyll before the main numbers began to appear in the east, and an impressive build-up in the southwest during November prior to an exodus from this area, presumably to Ireland. The monthly position is shown on a series of maps. Waxwings ceased to arrive about mid December, although on 12th a wave of 500-600 birds arrived on the Moray Firth; for the remainder of the winter birds appeared in many areas, mostly in central Scotland, with stragglers until April and May.

A smaller invasion, again starting early, took place the following winter, 1966/67. The arrival and spread of birds is described. As in 1965/66, there was a very early arrival of Waxwings in Argyll.

Records of the fruits eaten by Waxwings during the 1965/66 invasion are listed month by month, and other miscellaneous food items are mentioned. Mortality is briefly discussed.

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A visit to Stack Skerry and Sule Skerry

DAVID M. STARK

(Plate 52)

Introduction

Stack Skerry, sometimes known as Sule Stack, is an isolated rock in the Atlantic Ocean about 26 nautical miles north of Whiten Head in North Sutherland, and about 33 miles west of Orkney Mainland (59°2'N, 4°30'W). It is a twin-humped rock of hornblende gneiss, a narrow channel separating the two humps. In the northern hump there is a very deep geo which almost splits it in half. The highest point of the rock

is between 120 and 130 feet, and the area is about 6 acres. There is no vegetation on it. It is a well known gannetry, previous population estimates being between 5000 and 6000 pairs in 1914 by the Duchess of Bedford, 3500 pairs in 1937 by Malcolm Stewart, 2010 pairs in 1949 and 2800 pairs in 1960 by James Fisher and Dr W. J. Eggeling.

Sule Skerry is little more than a reef, 40 to 50 feet high and about 35 acres in area, lying approximately 5 miles NNE of Stack Skerry (59°4'N, 4°24'W). It is some 850 yards long from east to west and 550 yards broad from north to south and is deeply incised by geos on all sides. Some 12 acres of the centre of the skerry are covered by a rich brown loam of varying thickness composed of decayed vegetation. The vegetation is primarily an 18" high mayweed *Tripleurospermum maritimum*. The loam is riddled with Puffin burrows. A manned lighthouse was built on Sule Skerry in 1895.

On 15th July 1967 at 10.30 a.m. BST a party of eleven birdwatchers from Caithness and Orkney left Kirkwall Harbour for Stack Skerry. The Caithness members of the party had crossed the Pentland Firth the day before on the *St Ola*, which plies daily between Scrabster on the mainland and Stromness in Orkney. The night was spent camped in the back garden of Jim Williams, one of the Orkney party.

In a fresh northeasterly breeze and dull conditions, the 55 ft seine-netter, the *Flourish* K914 of Shapinsay, headed north through the Wide Firth, past Gairsay on the starboard beam and then through Eynhallow Sound to Costa Head on the west of the Orkney Mainland.

At Costa Head Skipper Davidson took his vessel between the cliffs and the Standard, a tall stack just offshore, to give us a good view of the Kittiwake and Guillemot colony. It was estimated that there were about 1000 pairs of Kittiwakes and 1000 pairs of Guillemots on the Head, with some 50 Shags and 50 pairs of Puffins on the Standard.

Having passed the Brough of Birsay on the port beam, the *Flourish* altered course and headed west into the Atlantic. There was little of interest to be seen. Small parties of Kittiwakes were heading east towards Costa Head and the inevitable Fulmars were seen around the boat, occasionally chased by a Great or an Arctic Skua. The Arctic Skuas probably came from Rousay and Eynhallow. Small parties of Razorbills, Puffins and Guillemots were occasionally seen, but they were surprisingly few. Soon after we lost sight of the Orkney Mainland, the cloud cleared, the sun came out, and the wind dropped to light and veered to easterly. About 15 miles off the Orkney Mainland a party of six Turnstones flew past the *Flourish* heading eastwards.

As we headed further into the Atlantic, two things were

particularly noticeable. Firstly, the number of Great Black-backed Gulls, flying in all directions and at varying heights, and secondly, the absence of Gannets, in an area where they are generally reckoned to be plentiful.

Sule Skerry lighthouse was sighted some 10 miles ahead at 3.30 p.m., and we passed about a mile to the south of it, heading for Stack Skerry, as it is called in Caithness and on the Admiralty charts. From a distance of one mile Sule Skerry was an impressive sight, as it lay bathed in brilliant sunshine against a bright blue background, with thousands of Puffins flying round it. From off Sule Skerry, Stack Skerry could be clearly seen—a tall rock, the top three-quarters of which were white with guano.

Stack Skerry

Our first close view of the Stack revealed that both the north and south humps were covered with Gannets. The Stack was circumnavigated twice so that possible landing places could be surveyed and, during this period, what we took to be non-breeding birds flew off and circled our vessel.

Some idea of the sea conditions around the Stack can be derived from the fact that, with a very light easterly breeze, it was almost impossible to stand upright on deck on the windward side of the Stack, owing to the swell, while on the leeward side there was a dead calm, and also a most pronounced smell.

At 5.30 p.m. we heaved to, some 20 yards off the deep geo on the west side of the Stack's northern hump, and made our preparations for landing. Having been told of the difficulties of landing on the Stack, the party was fully equipped with all the necessary gear, but when Skipper Davidson, having rowed over, jumped ashore and ran some 60 feet up the rock in his plimsoles, a sigh of relief was heard. First of the bird-watchers ashore was the writer, who promptly began to slide back towards the Atlantic. Fortunately, his slide was soon stopped. The whole party was quickly ashore and a count of the Gannet nests made as we made our way to the top of the Stack. Generally the going was easy, but once among the nesting birds, which frequently pecked at our trouser legs, footwear became extremely slippery with Gannet droppings, fish and offal. Some of the fish, mostly mackerel, were at least 9" long. A particular hazard was when what looked to be a flat piece of rock proved to be a crust of white guano on top of two or three inches of greasy water.

Nesting of the Gannets was in all stages of development; eggs unhatched, eggs hatching, and young at all stages from newly hatched chicks to some birds almost ready to fly.

Guillemots were found nesting amongst the Gannets. Nests were generally made of tangle, with occasional pieces of flotsam. Three fisherman's net needles were seen in the composition of the nests. Usually the nests were on the dry rock but quite a number were found to be floating on water trapped in ledges. This seemed to have no effect on the young.

Two thousand Gannet nests were counted, and it was estimated that there were about 1500 more on the east face of the north hump, which we felt was too dangerous to climb down. No Gannet nests were seen on the south hump. An estimate of the non-breeding Gannet population was 3500, roughly the same as the number of nests.

The Guillemot population was estimated at about 200 pairs, and out of a sample count of 50 birds, five were Bridled.

A hundred pairs of Kittiwakes were nesting, with 400 non-breeding birds present. The breeding birds were all on the west face of the north hump.

One juvenile Shag was seen on the north hump.

Twenty grey seals were seen in the water close to the Stack.

A Gannet and a Guillemot were seen to be slightly oiled.

After about two hours on the Stack, the party re-embarked and headed northeast for Sule Skerry. The sight of Stack Skerry bathed in sunshine contrasting sharply against the blue of the sea with thousands of Gannets flying around was magnificent.

Sule Skerry

The landing on Sule Skerry proved to be more difficult than that on Stack Skerry. Despite the aid of a rope ladder which was lowered by the lightkeepers, there was still a 10 foot climb to be negotiated. From a distance the ascent looked difficult, but once the top of the ladder was reached it proved to be easy, with plenty of handholds and footholds.

On landing on Sule Skerry, two things are particularly noticeable. Firstly, the smell, and secondly, the thousands of Puffins which are flying around. We quickly realised that the smell came from the Puffin droppings.

Having pitched camp, and eaten, the party split up to explore the Skerry and to watch the thousands and thousands of Puffins flying around. As the sun slowly set, there seemed to be a continuous stream of Puffins dropping into their burrows, each bird carrying a mouthful of small fish.

About midnight the movement of Puffins ceased and the Storm Petrels came out. Two mistnets were erected and half of the party spent the next two hours catching and ringing Storm Petrels. We had the good fortune to catch and ring

a Leach's Petrel, which was a new bird for all members of the party. As dawn came, the mistnets were quickly taken down while the movement of Puffins to and from their burrows started.

When we awoke later in the morning the Skerry was shrouded in mist, but this soon began to clear. The ringers set to work ringing Puffins, and we quickly found that the easiest way to catch them was to put an arm up the burrow, while crawling on all fours amongst the mayweed. A sharp bite or scratch soon told us whether the burrow was occupied or nor. In this way 150 Puffins were ringed before it was time to pack up and depart. During our spare moments, a quick census of the birds on the Skerry was made.

Puffins were found nesting almost everywhere, including suitable stony areas. It was estimated that there were some 60,000 pairs nesting on Sule Skerry.

Storm Petrels were heard under the hut to the south of the lighthouse, but none was heard under the railway lines, a place where previous visitors to the Skerry had reported them. The site where mistnetting took place was an outcrop of rock to the northeast of the light towards Long Geo, and nests were found in this area. No estimate of numbers was made but it was felt that the birds probably nest throughout the Skerry. There are plenty of empty burrows and suitable rock sites.

Razorbills were found nesting under rocks but no estimate of the population could be made.

The following is a summary of the other birds recorded:

Fulmar—10 pairs
Shag—100 pairs
Eider—20 nesting pairs, 20 non-breeding birds
Redshank—one heard
Great Black-backed Gull—20 pairs
Herring Gull—50 pairs
Kittiwake—500 pairs
Terns—4 colonies, totalling 400 pairs—mostly Arctic, with the odd Common
Black Guillemot—2
Rock Pipit—4

Previous visitors to the Skerry have commented on the number of earwigs to be found, and we noted the same thing.

No seals were seen at Sule Skerry.

At noon on the 16th, in brilliant sunshine, the *Flourish* sailed for Kirkwall. Our 14 hours on Sule Skerry were too short, particularly when we thought about Leach's Petrels.

Do they nest there? A previous report of their nesting on the Skerry has never been accepted.

The return trip to Orkney was uneventful, except for the sighting of four Leach's Petrels some 10 miles off the Brough of Birsay. Costa Head was our first landfall, and as we sailed through Eynhallow Sound it became very cloudy and dull, though this did not damp our spirits. We docked at Kirkwall seven hours after leaving Sule Skerry. Once more the Caithness party slept in the back garden, before returning to 'Scotland' on the *St Ola* next day.

Members of the party were David Stark, Eddie Balfour, Pamela McMorran, Peter James, Jim Williams, David Glass, Tony Cumstey, Bill Scharf, Peter Chester and Mrs Chester, Marshall Fairbairn.

Summary

Landings on Stack Skerry on 15th and Sule Skerry on 15th-16th July 1967 are described. Counts and other details are given of the breeding and non-breeding birds (including Leach's Petrel) and those seen on the voyage from Orkney.

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Short Notes

Hybrid Tufted Duck x Pochard in Edinburgh

On 18th February 1967 I visited Duddingston Loch. There were some 1500 to 1800 Pochard and a good many Tufted Duck on the loch and a duck which I could not recognise. My first reaction was that it was a hybrid of which one parent must have been a Tufted Duck, as there was a clear indication of a short crest. I was joined by D. R. Anderson and together we noted every detail which we could and we

agreed that it was a bird new to us. We watched it for at least an hour and noted its Scaup-like shape. It was much smaller than a male Scaup which was on the loch at the time, and we wondered if it might be a Lesser Scaup.

Next day, after looking up books and reports on wildfowl, we returned and had very excellent views and were able to get a good look at the plumage pattern and colour as well as the comparison of shape with Pochard and Tufted Duck. The bird seemed very similar in shape to a Lesser Scaup but its plumage did not exactly fit any of the illustrations we had seen. I would describe it as follows:

> Shape and colour of bill similar to male Scaup's; irides bright yellow; head very dark, but not black, with top and back showing bronze-purplish reflections in sunlight; small but distinctive tuft; breast black; back dark grey, but no vermiculation could be seen, perhaps owing to the distance (100 yards); sides much paler grey, paler than Pochard; tail, upper and under coverts blackish; white clearly visible on secondaries when the bird stretched a wing.

Amongst a substantial number of skins of Lesser Scaup at the British Museum I found one of a male which seemed virtually identical to the Duddingston bird. It had coarse vermiculation on the back, but much paler and finer markings on the flanks. Hybrids are always rather difficult unless the features of one or other parent are fairly obvious, and if the Duddingston bird was a hybrid it could only have been between a Tufted Duck and a Pochard. One likes to be certain about the identity of any bird before reporting it, and therefore it may not be a good thing to publicise this record, except that as so many Scaup winter in the Forth, mostly too far out to be seen clearly, an occasional member of the American species could possibly turn up.

J. A. Anderson.

(We sent this account, together with an excellent painting of the bird which Mr Anderson made, to Dr C. M. Perrins, author of a paper on "The 'Lesser Scaup' problem" (*Brit. Birds* 54: 49-54) which dealt with one particular hybrid Tufted Duck x Pochard and referred to a dozen other recent English records. He reported that the bird looked much more like that hybrid than a Lesser Scaup—especially the colour on the top of the head and the crest. He passed the details to B. L. Sage, who has examined many museum specimens and has a very extensive skin collection of duck hybrids, and he wrote that both the drawing and the notes left him in no doubt that this was another Tufted Duck x Pochard hybrid.—Ed.)

Goshawk in Aberdeenshire

In the late afternoon of 5th February 1967 I was in my garden near Hazlehead, Aberdeen, when I happened to glance up and saw a large grey bird gliding towards me. It was about the size of a Herring Gull but the wings were much darker as well as being broader and blunt ended. As it passed over me, the bird banked steeply in the bright sunlight and I was able to note its very long, narrow tail with three dark bands across it, its white under tail-coverts and comparatively small head. It rapidly disappeared from view but these features, and its flight, which consisted of a few wing beats followed by a glide, convinced me that the bird was a Goshawk.

GORDON M. LEES.

Gyr Falcons in Outer Hebrides and Shetland

On 11th May 1967 I watched a Gyr Falcon at Port of Ness, Lewis, for about an hour and a half in good light. The bird was first seen in flight with a Rock Dove in its talons, but it dropped this when mobbed by gulls and Hooded Crows. It was seen at ranges down to 30 yards, flying around and perching on fence posts, before it finally retrieved the pigeon and flew off. Its flight was strong, with slower wingbeats than a Peregrine, and its wings were more broad-based and less pointed; it was seen to glide for short distances and to soar. When perched it stood very erect and appeared bigger than a Hooded Crow but smaller than a Raven. Its body was white and unmarked, while its wings and tail were cream, the wing coverts showing spots of greyish-brown. The legs were covered with white feathers.

ALLAN SMITH.

On the evening of 24th May 1967 James T. Thomson telephoned to report an unusual bird in one of his fields at Haroldswick in Unst. I went there immediately and watched the bird for about five minutes in overcast conditions as it fed on the corpse of a dead bird, later found to have been a Rock Dove. At first I thought it might be a Snowy Owl, but this possibility was rapidly excluded by its long tail, long, narrow neck and small head. I did not see the breast as it was facing away from me, but the general colour of the back was white, with a few dark streaks on the nape. The wings were light grey with numerous small dark spots, and the primaries were darker. The whole of the tarsus appeared to be covered with thick white feathers. The bird seemed from its general colouring to be a Greenland Falcon, though it looked larger, about one and a half times the size of the Hooded Crows that

were mobbing it. It has been accepted by the Rarities Committee as a Gyr Falcon showing the characteristics of the Greenland race.

MAGNUS SINCLAIR.

(There have been several recent records of Gyr Falcons in the Northern Isles, including one in Unst for several months in 1966 (*Scot. Birds* 4: 372), and one wonders how many birds are actually involved.—ED.)

Cranes in North Argyll

An adult-plumaged Crane at Ferry Farm, Clachan, West Loch Tarbert, was seen first by I. McPhail on 10th May 1966 and stayed in the area of Loup Farm until at least 28th May 1966 (I. MacDonald per A. McArthur); it was seen once or twice at Ardpatrick on the north side of the loch. Thereafter it is said to have moved to a small island at the entrance to the loch, frequenting the area between these two localities for most of the summer. We have been unable to get adequate details of these subsequent sightings.

A Crane was seen in a shallow bay a mile south of Loup Farm on 17th February 1967 by the Rev. J. D. Sutherland, but it is not known whether this was the same bird or the one recorded below.

At the end of January 1967 it came to light that an immature Crane had been frequenting another area 10 miles south, at Rosehill Farm, Muasdale, Glenbarr, for some time. The bird was photographed by the *Scottish Sunday Express* (which has kindly allowed us to use one of the pictures—plate 55), and the publicity led many birdwatchers to make the trip to Kintyre to see the bird. It had been seen first on 19th December 1966 by D. MacKinnon, on whose land it was, and was last reported on 19th March 1967 by R. G. Caldow, R. A. Jeffrey, G. L. A. Patrick, B. Thurston, G. T. White and others.

We have had detailed notes about the Glenbarr bird from many people. It was not approachable, though taking less notice of farm workers than of birdwatchers. It apparently spent a lot of time turning over small piles of manure spread out on an unploughed stubble field. Among those who saw the bird or wrote about it, apart from those already mentioned, were D. Colville, W. M. M. Eddie, J. Greenlees, A. McArthur, Capt. Macdonald, Mrs M. E. McNeill, D. J. Norden, W. K. Richmond and W. Russell.

ANDREW T. MACMILLAN.

Marsh Sandpiper in Caithness—a new Scottish bird

Following reports of a peculiar wader at Mid Sands, Dunnet Bay, on 3rd September 1966, I saw it there is poor light that evening and obtained a brief description. Next day it was watched also by Dr P. McMorran, Mrs J. A. R. Grant, Keith Goodchild and Ken Melhuish, and a more detailed description was taken by DMS and PM in sunlight at 20 yards range. It was last seen on the 5th, when unsuccessful attempts were made to mistnet it.

It was a slender, long-legged wader with a rather slow flight, very white rump and tail, and legs projecting well beyond the tail; no wing-bar could be seen. The legs were about the same height as a Redshank's, and the body if anything slightly bigger, but distinctly slimmer than a Bar-tailed Godwit or a Greenshank, species which could be seen within a few minutes walk. The flight was noticeably slower than either of these, with deep wingbeats. On the ground the bird had a slender, graceful appearance, which accentuated the length of the legs.

It fed only on the freshwater part of a burn filled with clumps of vegetation, bobbing its head in typical sandpiper fashion. When disturbed it gave a soft *teoo-teeo* and flew about 30 yards towards the mouth of the burn, but made no attempt to feed there. After a few minutes it returned to the freshwater area and resumed feeding. When any other bird appeared it became very alert.

Description. Crown and nape streaked grey-brown; chin white; very noticeable white sides and front of forehead, making white V with grey-brown of crown; slight but noticeable eyestripe; front of neck white, but sides streaked grey-brown, if anything slightly darker than crown, coming further round towards front than on chin area; upperparts dark brown, edged grey-white, as on primary, secondary and greater coverts; primaries dark brown, edged light brown; rump and tail white, with streaks of brown on a few of the central tail feathers giving a trace of barring in flight, but not detracting from the overall impression of whiteness; white of rump seen to extend almost to base of neck when head bent forward in feeding; breast, underparts and underwing white; bill medium long, broad at base, tapering considerably to tip, generally slender, with slight upturn at tip; base of bill greenish slate-grey and tip dark; iris dark brown; legs greenish yellow.

DAVID M. STARK.

(Although the Marsh Sandpiper has not previously been recorded in Scotland, there are some 15 English records, in April-May and August-October (*Brit. Birds* 57: 268; 60: 318). The species is a summer visitor to western Asia and eastern Europe.—ED.)

Current Notes

Compiled by A. T. MACMILLAN

(Key to initials of observers : D. R. Anderson, R. S. Baillie, G. J. Barnes, D. A. I. Baty, Miss P. G. T. Baxter, J. A. Begg, F. Beltman, G. Bennett, J. F. Bissett, H. Boase, T. Boyd, D. Bremner, Miss E. Brown, Miss C. F. H. Bruce. D. E. Bruce, R. G. Caldow, T. M. Cameron, E. N. Campbell, J. Campbell, W. D. Campbell, Miss C. Charlier, D. Coutts, M. C. Coyne, H. G. Cree, G. M. Crighton, W. A. J. Cunningham, R. H. Dennis, P. de Pree (PdP), R. C. Dickson, G. Dixon, H. E. M. Dott, Capt. H. Drummond, J. Dunbar, Miss C. F. Dunsire, G. M. S. Easy, W. M. M. Eddie, N. Elkins, Sir R. Erskine-Hill, M. J. Everett, R. Farmer, B. C. Forrester, M. Forrester, R. W. Forrester, A. M. M. Fyffe, H. Galbraith, I. Gibson, T. Gibson, A. Goodin, A. G. Gough, Mrs J. A. R. Grant, K. Hague, J. Hamilton, J. J. C. Hardey, E. R. Harris, N. Hayes, C. G. Headlam, L. R. Higgins, Dr R. D. Hill, D. C. Hulme, R. A. Hume, E. N. Hunter, F. Hunter, E. Hutchison, Rev. G. T. Jamieson, R. A. Jeffrey, Dr D. Jenkins, P. Johnson, T. H. Jorgensen, G. D. Joy, G. Kerr, J. Knowles, D. G. Law, A. F. Leitch, J. Lockerbie, J. A. Love, I. H. J. Lyster, A. Macdonald (AM), D. Macdonald, M. A. Macdonald, Miss C. R. MacKinnon, I. M. MacLean, A. T. Macmillan, Mrs E. H. L. Macmillan, A. MacRae (AMcR), F. Marr, J. Maxwell (JMx), W. S. Medlicott, R. Meekin, T. D. H. Merrie, J. Mitchell (JMt), W. M. Morrison, C. C. I. Murdoch, W. Murray, D. J. Norden, D. W. Oliver, C. E. Palmar, W. Porteous, J. Potter, G. F. Raeburn, Mrs I. Rainier, A. D. K. Ramsay, I. B. Roy, R. Shand (RSd), R. Shaw (RSw), R. J. W. Shaw, G. Simmons, J. H. Simpson (JHSp), M. Sinclair, D. Skilling (DSk), P. J. B. Slater, Mrs E. M. Smith, P. Smith, R. T. Smith, R. W. J. Smith, Dr T. C. Smout, D. Stalker (DSt), D. M. Stark, Lt. Cdr. A. W. A. Stevens, A. G. Stewart, R. W. Summers, I. S. Suttie, J. H. Swan (JHSw), C. S. Tait, I. Taylor, Miss V. M. Thom, D. B. Thomson, D. Thorogood, J. Thorogood, B. Thorston, D. A. Tindal, R. J. Tulloch, Flt. Sgt. F. J. Walker, K. G. Walker, G. Waterston, Hon. D. N. Weir, Dr R. S. Weir, Hon. W. Weir (WWr), G. T. White, R. Willson, W. Wyper (WWy), J. G. Young, R. F. Young, B. Zonfrillo.

Unless otherwise stated all dates refer to 1967.)

Distribution

Records from before 1st May 1967 are excluded from this section except where related to more recent ones.

Summer records of **Great Northern Divers** in Sutherland and Caithness are of one in Balnakeil Bay, Durness, on 6th July (RAH); one at Tongue on 22nd July (GMSE); and two in Dunnet Bay on 9th August (RAH, DT, JT). In Aberdeenshire, counts of **Red-throated Divers** off the Sands of Forvie showed 35 on 19th August and 27 on 27th September but only odd birds on other days (HEMD); there were 45 off Balmedie on 21st September (NE). In seven half-hour watches from various places between Portpatrick and the Mull of Galloway on 24th September a total of 33 divers, of which two

PLATE 52. Stack Skerry from the north (see p. 548).

Photograph by David M. Stark

PLATE 53. A typical small party of Waxwings, Kilmarnock, Ayrshire, October 1966 (see p. 534).

Photograph by William S. Paton

PLATE 54. Portrait of a Waxwing, Kilmarnock, Ayrshire, October 1966.
Photograph by William S. Paton

PLATE 55. The Crane which spent the winter of 1966/67 at Glenbarr, Argyllshire (see p. 556).

Photograph by Scottish Sunday Express

certainly and all probably were of this species, flew south through the North Channel into the Irish Sea (GK, JMx, DSk, RTS, JGY).

Six **Great Crested Grebes** were back on the sea at Port Allen on the Tay on 1st July (HB). **Red-necked Grebes** are reported from:

Norwick Bay, Unst—1 on 1 Oct (FJW).
Fair Isle—1 from 31 Aug to 3 Sept (RHD).
Gruinard Bay, W. Ross—1 on 15 Sept; there are virtually no records for the northwest (CFHB, ADKR).
Loch Marlee, Perth—1 on 17 Sept (VMT).
Aberlady Bay/Gullane Point, E. Lothian—1 on 27 Aug (THJ), and up to 3 between 17th and 24 Sept reported in numerous letters (GB, DEB, RF, RWF, RAJ, PJ, AFL, MAM, BT, GTW, BZ).

A **Slavonian Grebe** was on Craighall Dam, Renfrewshire, on 4th and 5th June (WMME, DJN); and one was on Lintrathen Reservoir, Angus, on 18th August (HB). An adult **Black-necked Grebe** in moult was on Forfar Loch on 31st July (HB). A pair of **Little Grebes** on Hillwell Loch in September with three chicks is the first record of breeding in Shetland (RE-H, FH, GDJ).

A **Leach's Petrel** was caught on North Ronaldsay by a cat on 31st July (KGW). Others away from their known breeding haunts were one off Dunnet Head, Caithness, on 31st August (DMS), and one off the mouth of Gruinard Bay, Wester Ross, on 15th September (CFHB, ADKR).

Eight **Manx Shearwaters** were off Montrose, an area where they are not often noted, on 8th July (GMC). Fewer than usual were seen in the outer Firth of Forth this summer (FM); but off Cramond Island 20 were flying east on 1st July (TCS). On 6th September one came in from the east over mudflats at Skinflats, Stirlingshire, and rose to a considerable height over the Kincardine Bridge, continuing westward. Westerly gales had been blowing during the previous 24 hours, and the observer had seen hundreds of Manx Shearwaters off Troon, Ayrshire, the day before (DSt). About 160 were reported two miles offshore at Prestwick, nearby, on 31st August (AGS). At Meikle Ross, Kirkcudbrightshire, on 16th July 207 were counted moving into a force 4 SSW wind during three half-hour watches (DSk, RTS, JGY).

A **Great Shearwater** was seen at Fair Isle on 27th August (GJB). Though a bird of the northwest, this species is not often seen from the mainland, but there was one off the mouth of Gruinard Bay on 15th September (CFHB, ADKR). The following records of **Sooty Shearwaters** include reports from Shetland, where they are regular in autumn, but not usually in such numbers:

Between Foula and Shetland—8 near small fishing boat on 22 Aug

(JJCH, EH).
Off Shetland—10 seen from Aberdeen boat on 22 Aug (JJCH, EH).
Fair Isle—first 1 on 14 Aug, with 15 on crossing on 8 Sept, and 12 off island on 14th (RHD).
Pentland Firth—singles on 6th and 19 Aug (NE).
Between St Kilda and Flannans—1 on 5 Sept (GB).
Balchrick, Kinlochbervie—1 with SE movement of Manx Shearwaters and Kittiwakes on 24 July (GMSE). First for West Sutherland.
Between Islay and Kintyre—1 on 7 Sept (GB).
Troon—1 flying up Clyde on 22 July (RGC).
Montrose—1 on 25 Aug (GMC). First for Angus.
Bell Rock, Angus—1 or 2 on 16 Sept (JD, RAJ, RWS, DBT).
Fife Ness—2 on 1 Sept (PGTB).

A **Fulmar** of Fisher's dark phase 'D' (*The Fulmar* p. 267) had a site at Whinnyfold, Cruden Bay, Aberdeenshire, on 27th July, but breeding was not proved (HEMD). One was up the Forth at the Kincardine Bridge on 3rd September (IT); and inland records include one at Loch Leven, Kinrossshire, on 5th June, and two on Benarty Crags nearby on the 18th which stayed most of the day and landed on the rocks (JHSw). Two miles north of Dumfries one was flying inland on 30th August (DSk). An immature **Gannet** flew over the centre of Falkirk on 13th September, and there was one over Carronshore, Stirlingshire, on the 17th (IT).

The Lamb had 206 **Cormorant** nests (33 empty) when counted this year and there were about 30 on Craigleith, where apparently about half the birds moved in 1966 after failure on the Lamb (*Birds* 1: 242).

A heronry not listed in *Bird Study* 5: 90-109 is on a steep grassy cliff on the east side of Fuiay (1 mile N of Barra). On 20th July there were five adult and two juvenile **Herons** there and two of the three nests seemed to have been used this year (RDH).

One of the very red **Caribbean Flamingos**, at Tyninghame from 28th June (*Haddingtonshire Courier* 30.6.67), was possibly the same as a Flamingo reported at Berwick a day or two earlier (*Scotsman* 28.6.67). The dried remains of a Flamingo were found under tufts of grass at Tyninghame about the middle of September, and it is possible that it had been shot (AM). No skin of the West Indian race was available at the Royal Scottish Museum, but it was thought that the bird was of that form (IHJL). A **Chilean Flamingo** (with grey legs and pink 'knees') was at Aberlady from 23rd July to 15th August (HGC, DJ, AFL); and a third bird was at Glencaple, Dumfriesshire, on the 18th (PJ). It is clear that there are quite a few escaped Flamingos of various species and races in the British Isles, and they often seem to survive quite well.

A drake **Garganey** was shot near Browell, Dumfries, on 5th

October (RW, JGY). *Birds* (1: 238) reports the first breeding of **Gadwall** in the Outer Hebrides, a pair with nine chicks being seen on a loch in North Uist on 29th May. Records of possible interest are of a pair on the Loch of Strathbeg on 3rd September (NE), and of a drake at New Cumnock, Ayrshire, from 14th to 16th September (JL). A duck **Wigeon** on Handa on 1st October was the first recorded by the R.S.P.B. in the five years since they took it over (MJE). Some reports of **Pintail** mention a duck and drake at Sandside Bay, Reay, Caithness, on 23rd September (JARG); seven with Mallard at Meikle Loch, Aberdeenshire, on 25th September, and three on 27th (HEMD); and three at Aberlady on 2nd September (MJE), and one there on the 17th (PJ, AFL). A duck **Shoveler** was on Fair Isle from 28th July to 5th August (RHD); at Strathbeg there was a maximum of 36 on 9th September (NE); at Possil Loch, Glasgow, there were at least 30 on 26th August (THJ); and at Duddingston Loch, Edinburgh, numbers built up to 42 on 18th September (DRA).

Summer records of **Scaup** are of two pairs at Durness, Sutherland, on 23rd July (GMSE); a single bird at Inverness on the 29th (NE); a drake on the Langbank-Bishopton mudflats, Renfrewshire, on 31st July (GD, GTW); and a duck and drake in Dunnet Bay on 9th August (RAH, DT, JT). A duck was on Kilconquhar Loch, Fife, on 9th September (MJE, MAM); and about 30 were back at Seafield, Leith, by 3rd October (MJE, JK). There was a duck **Pochard** at Fair Isle on 18th and 19th September (RHD). The duck **Goldeneye** at Gadloch, Lanarkshire (4: 511) could not be found from 1st to 11th July but was back on 10th and 13th August (WWy, BZ). Other summer records are of two at Spey Dam on 14th July; one at Loch Brora on 18th July (GMSE); one at Lintrathen on 7th August (HB); two at Kilconquhar on 12th August and three on 21st (JARG); and one at Gladhouse on 10th August (ADKR, RWJS). One was at Opinan, W. Ross, on 17th September (CFHB, ADKR); two on the Ythan on 7th September and 4 on the 11th (NE); and two on Speyside on the 24th (DNW). Summer **Long-tailed Ducks** were one at Loch Branahuie, near Stornoway, on 18th July (AMMF); and one off Rousay pier, Orkney, on 13th August (NE). There were three in Sandside Bay, Reay, Caithness, on 4th September (JARG). A duck **Common Scoter** was seen with two young at South Yell on 29th August (RJT). Where up to 800 **Eiders** are normally seen off the Ayr-Troon coast, there were nowhere near the usual numbers in 1967 (AGS).

On 17th July there were 330 **Red-breasted Mergansers** at Kilmuir on the Cromarty Firth, and next day 70 at Gallrope Bank and 200 elsewhere in the Dornoch Firth, and 100 in Loch Fleet (GMSE). Other reports from the Moray Basin are

of 210 at Whiteness Head, near Nairn, on 1st July (NE, WMM); and over 200 in Nigg Bay, Cromarty Firth, on 15th August (RAH, DT, JT). There were 180 at the Sands of Forvie, Aberdeenshire, on 20th July (NE), 186 on 19th August, and over 100 on the 23rd, but few on other days (HEMD). On 11th September there were 400 off Montrose (GMC). A duck **Goosander** sitting on eggs in the stump of an old oak tree near Hawick in June is evidently the first proved to breed in Roxburghshire (WSM).

An immature **Shelduck** was at Gadloch, Lanarkshire, on 20th August (BZ). A drake **Ruddy Duck**, presumably an escape, was on Kilconquhar Loch on 4th September (PGTB).

The analysis of records of **Grey Lag Geese** is complicated by the wild and semi-domestic populations which breed in Scotland. In Tay a few were seen off Kingoodie up to 10th May; and there were 14 at Port Allen on 1st July (HB). A white goose at Kingoodie on 12th May and at Port Allen on 1st July seemed to be an albino Greylag, as also a pale goose at Montrose Basin on 16th June and 23rd August (HB). Two Greylags were seen on the sea with Eiders in Cruden Bay, Aberdeenshire, on 27th July (HEMD). Autumn records of parties of debatable origin are of 20-25 tired-looking birds trying to land on the shore at Arbroath on 3rd September (JD); four at Strathbeg on 16th September (NE); 24 at Kilconquhar on the 17th (DWO); and 12 flying south at Reay, Caithness, on the 23rd (JARG).

There is a 'reliable report' of four **Pink-footed Geese** at Kingoodie in mid August (per HB), and a series of early records:

2 Sept—first 10 flew W over St Monance, Fife, calling (DWO).
7 Sept—32 flew E over Dollar, Clackmannan (FB per TDHM).
11 Sept—45 'geese' seen from bus 1 mile SE of Pathhead, flying SW as if for Gladhouse (RSB).
15 Sept—30 flew over Mellon Udrigle, W. Ross (CFHB, ADKR); and 30-40 'geese' flew S over Lundin Links, Fife (RSW).
16 Sept—1 at Strathbeg (NE).
24 Sept—40 passed over Speyside (other birds were moving too) (DNW); 180 at Kinross (TCS); two at Gladhouse (EMS, RWJS).
25 Sept—three were on Meikle Loch, Aberdeenshire, all summer, but there were 20 more on this date (HEMD).

The four **Snow Geese** at Wooden Loch, Roxburghshire (4: 511), moulted and were still there on 5th August (RSB). Two rose from a field at Aultbea, Ross-shire, on 2nd September (AWAS). On Fidra, East Lothian, one, almost certainly a Lesser, was seen on 10th June (IBR, RWJS), and two were seen almost daily by the lightkeepers from 8th until about 18th September, and were wholly unapproachable (MJE). Five which arrived near Errol, Perthshire, with the wild geese on 2nd October (HD and *The Scotsman*, 12.10.67), could

perhaps be the same five that were seen at various places on the Tay and elsewhere between 21st October 1966 and 12th March 1967 (4: 457); though doubtless originally escapes from a collection it is possible that they may have migrated north in the spring with the Pinkfeet, as others have evidently done in the past (3: 138).

Two **Pale-bellied Brent Geese** were on North Ronaldsay on 21st July (KGW). Summer **Barnacle Geese** may be not only injured birds or escapes but, anywhere near Newport, Fife, may in fact be domestic hybrids with Canada Geese. These comments probably cover reports of two moulting in June on Loch Dornal, Wigtownshire (JGY); two with Greylags at Port Allen on 1st July (HB); and three at Elie Ness, Fife, on 3rd September (CFD per DWO). There was one at Skirsa, Caithness, on 28th September (JARG, DMS). The highest count of the flock of moulting **Canada Geese** on the Beauly Firth was 183 on 28th July (NE, JAL, WMM). In view of the evidence that some at least of these birds come from Yorkshire, the sighting of 60-70 Canada Geese flying south at Arbroath at 9 p.m. on 29th August is extremely interesting (JD). Twenty-five in flightless moult on the Islands of Fleet, Kirkcudbrightshire, on 17th July were neither ringed nor pinioned and were not part of the Dumfriesshire stock (JGY).

Summer records of **Whooper Swans** pose the same questions as those of geese; there is, for instance, a resident bird on the Tay in Perth, and several free-flying birds are in a collection near the Endrick mouth (JMt). A pair was at Forfar Loch from 21st June (HB); one was at Evanton on 17th July and one at Loch Meadie, Sutherland, on the 19th (GMSE); one was on the Beauly Firth on 28th July (NE). The bird on the River Ayr (4: 512) was still there on 1st September (AGS), but had moved $1\frac{3}{4}$ miles to the Doonfoot by the 17th (IG, RAJ, GTW).

An exceptionally early **Buzzard's** nest in the Culbin Forest had the smallest of three young birds at least two days old on 17th May, suggesting that the first egg was laid about 9th April (DNW). A pair nested successfully in northern Ayrshire again this year (DNW). One was seen near St Monance, Fife, on 25th September (PGTB). An early but very well described **Rough-legged Buzzard** was seen on moorland near Daviot, Inverness-shire, on 13th September (CC, CCIM).

There are several additions to the unusual number of records of **Marsh Harriers** this year (4: 512): one was seen at the Endrick mouth on 30th April and 18th June (MF, DSt), and one nearby at Gartocharn Ponds for about two weeks from 10th August (RSw); there was one at Airlie, Angus, on 23rd July (DAT); and one with tattered wing and tail feathers at the remnants of Hilda Marshes, Glasgow, on 10th September

(BZ). A female or immature **Hen Harrier** was seen in autumn north of the Scottish breeding range at Quarf, Shetland, on 29th September (DWO). There was a marked passage in Speyside from mid August to the end of September (DNW). One recovered in West Kilbride, Ayrshire, at the end of August had been ringed as a chick in central Scotland earlier in the year (JMt).

The Loch Garten **Ospreys** reared three young this year, but the second Speyside pair, although moving to a new site, again produced infertile eggs, which have been sent for analysis. A third nest was found elsewhere in Scotland and two young were reared (GW). Other sightings of Ospreys include single birds at North Third Reservoir, Stirlingshire, on 8th May (GTJ), and at Laxford Bridge, Sutherland, on 6th July (RAH); and in autumn being chased by a Great Skua south of Bressay, Shetland, on 30th September (DWO); over Insh marshes (the first bird in Speyside for a month, and evidently a migrant) on 24th and 28th September (DNW); near Kilconquhar on 27th August (DWO); and fishing in a reservoir in southeast Ayrshire on 5th September (WWr).

There are two records of **Hobbies**, extremely scarce birds in Scotland: one near Gardenstoun, Banffshire, on 1st June (AGG); and one near the Manse on Fetlar on 19th August (TG). There was a marked passage of **Merlins** on Speyside from mid August to the end of September (DNW). One may compare this with the situation on Fair Isle, where passage began on 28th August but was mainly from 8th September, with a maximum of three birds on the 21st (RHD).

A rather low **Ptarmigan** was seen by the railway at about 1000 ft at Tomatin, Inverness-shire, on 19th September (THJ). A **Quail** was calling at Outer Skaw on Unst on 14th July (MS); one sang on Fair Isle till 17th July, and there was one on the 30th (RHD). One was heard at Evanton, Ross-shire, on 11th July (CGH). Near Haddington one was seen twice on 26th August during harvest at West Morham Farm (PdP per AM). For the fourth successive year Quail were recorded in the Lochmaben district of Dumfriesshire, one being heard at Applegarthtown between 0345 hrs on 17th June and 9th July (RTS).

The West Sutherland **Spotted Crake** was heard calling until 28th July, and for a short time there were two (DM); it may be stressed that all the evidence suggests that the 1966 invasion (4: 372) was not just the discovery of an established colony that had been previously missed (RWJS). **Corncrakes** have become so scarce in Forth that it is worth recording one calling on 13th July by Largo Bay, Fife (DWO).

Flocks of 20-30 **Oystercatchers** flying SW from Inverness

down the Great Glen were noted several times from 31st July (WMM). Numbers of **Lapwings** arrived almost a month late in Caithness this autumn with over 1000 at Achscrabster on 22nd September, the same number at Kirk on the 24th, and 500 at Riverside, Wick, also on the 24th (DMS). There were greater numbers of **Ringed Plovers** in Caithness this autumn than usual, particularly young birds, including over 100 at Sandside on 1st October (DMS). The **Grey Plover** is scarce in Caithness, where there was one at Castlehill and two at Sandside on 22nd September, and one at Sandside on 1st October (JARG, DMS). One was at the Endrick mouth on 23rd September (JMt). The male **Dotterel** at the site in North Sutherland (4: 513) was with one well grown chick on 2nd August, when there were two addled eggs in the nest (DCH).

Turnstones inland were at Gladhouse, Midlothian, on 30th July (2), and 8th (1) and 15th August (2) (EMS, RWJS). Fair Isle had single **Jack Snipe** from 5th September, but eight on the 18th (RHD); at Paisley Moss the first was seen on 19th September, and they increased steadily to seven on 1st October (GTW).

At Aberlady there were 250-300 **Curlew** on 19th June, which seems to fall into the midsummer period when they are said to be very scarce (*The Birds of Aberlady Bay Nature Reserve*) (HEMD). The first reports of migrant **Whimbrel** are as follows:

12 July—heard at Easthaven, Angus (HB).
15 July—14 calling in flight near Fife Ness (JARG).
18 July—a migrant on Jura (PJ); first few on Ythan (6 there next day) (HEMD, WM); 1 at Kingoodie (HB).

Records of **Black-tailed Godwits** come from:

Montrose—singles on 15 Aug, 3rd and 6 Sept (GMC).
Eden estuary—15 on 1 July (AMMF), and counts of about 80 on 6 Aug (GB) and 70 on 12th (DWO).
Aberlady—3 on 13th (DJ) and 22 Aug (MAM), 2 on 10 Sept (AGS), and 1 on 18th (DEB, MAM).
Seafield, Leith—2 on 4th, 6th, 21st and 22 Sept (MJE).
Skinflats—1 on 31 Aug (IT).
Bemersyde Moss, Berwick—on 10 July 10 flew off, 17 came back, then all flew off (AMMF).
Troon—1 on 9 Sept (RGC).
New Cumnock—1 on 6 Sept (JL).

Inland there were three **Bar-tailed Godwits** at Gladhouse on 8th August (EMS, RWJS). **Green Sandpipers**, a good sprinkling of them, were at:

Fair Isle—2 only; 1 on 12-15 Aug and 1 on 5 Sept (RHD).
Montrose—1 on 12 Aug (GMC).
Fife Ness—1 on 9 Aug (DWO).
Tyninghame—1 on 29 Aug (MAM).
Aberlady—1 on 1 Sept (AM).

Gladhouse—singles (probably 3 or 4) intermittently from 8 Aug to 24 Sept (EMS, RWJS).
Yetholm Loch—2 on 14 Aug and 1 nearby on 6 Sept (RSB).
River Bowmont, Yetholm—1 on 29 Aug (RSB).
River Kelvin, Glasgow—3 at Summerston on 27 Aug (DJN).
Dumbarton Golf Course—1 on 10th and 25 Aug (DGL).
Clyde above Hamilton—2 on 8th, 12th and 17 July (DSt).
Ballantrae, Ayr—1 on 29 July (AF, RWF).

In contrast to the last species, very few **Wood Sandpipers** were recorded:

Arbroath—1 on 20 Aug (JD).
Seafield, Bilston, Midlothian—1 on 9 Aug (ADKR).
Paisley Moss—1 on 28 Aug (RGC, GD, IG, RAJ, GTW).

At Yetholm, Roxburghshire, a marked increase was noted in the number of **Common Sandpipers**, seven pairs breeding where there were usually three or four (RSB). Autumn records of **Spotted Redshanks** are from:

North Ronaldsay—1 on 24 July (KGW).
Ythan—singles on 24 Aug and 22 Sept (NE).
Montrose—singles on 8th and 30 July, 13-17 Aug, and 3rd and 6 Sept (GMC, JD).
Arbroath—1 on 1 Sept (JD).
Eden estuary—1 on 12 Aug (DWO).
Cameron Reservoir, Fife—4 on 24-25 Sept (PGTB, RSW).
Skinflats—1 on 17 Sept (IT).
Barr Loch, Renfrew—1 on 23 Sept (RGC).
Sandmill, Sandhead, Wigtown—2 on 19 Aug (RCD).

The first records of **Greenshanks** on the move are:

1 July—1 at Gadloch, Lanark, stayed to 11th (WWy, BZ).
8 July—1 on Luce estuary (RCD); 1 at Montrose Basin, where others were noted from 23rd (GMC).
20 July—1 or more on Ythan (HEMD).
23 July—1 or 2 at Montrose Basin (JD).
24 July—1 on North Ronaldsay (KGW).

There was a **Knot** in Gruinard Bay, Wester Ross, on 26th July (AMMF); there are few records for the northwest mainland. Inland a red one was at Gladhouse on 8th August and a grey one on the 13th (EMS, RWJS). Good numbers of **Little Stints** were reported in September:

Haroldswick, Unst—1 on 23rd and 27th (MS, FJW).
Pool of Virkie, Shetland—24 on 5th, 4 on 6th, 20 on 8th and some still there on 24th (MCC, GDJ).
Fair Isle—1 on 6th-7th, 14 on 18th, 13 on 19th, 12 on 20th, decreasing to 1 on 27th (RHD).
Birsay, Orkney—5 on 10th on shore (PJBS).
Sandside, Reay, Caithness—2 on 18th and 1 on 22nd-24th (JARG, DMS).
Loch of Strathbeg—1 on 16th (NE).
Ythan—7 on 17th (NE).
Mouth of N. Esk, Angus—7 on 15th (GMC).

Montrose—2 on 4th and 1 on 16th (GMC).
Cameron Reservoir, Fife—1 on 24th-25th (PGTB, RSW).
Fife Ness—1 on 11th (DWO).
Barns Ness, East Lothian—3 on 13th (MJE).
Aberlady—3 on 22 Aug (MJE); in Sept, 1 on 9th (DJ), 1 on 17th-18th (DEB, AFL, MAM), and 2 on 23rd (AM).
Gladhouse—2 from 7th to 24th (EMS, RWJS).
East of Grangemouth Docks—1 on 19th and 11 on 22nd (IT).
Barrassie, Troon—1 on 30th (HG, RM, GTW), still there on 1-3 Oct (RGC, RM, GTW).
New Cumnock—4 on 14th, dwindling to 1 on 18th (JAB, JL).

It is interesting to record that in four years living beside the Pool of Virkie, Shetland, GDJ has seen no Temminck's Stints but has found the Little Stint occurring in small numbers each autumn. This is what one expects and fits the Fair Isle data, in contrast to the suggestion in *Birds and Mammals of Shetland* that Temminck's is at least as common as the Little Stint in Shetland.

There was a **Pectoral Sandpiper** on Fair Isle on 11th August (RHD). Like the Little Stint, the **Curlew Sandpiper** is reported in unusual numbers during September:

Pool of Virkie and Sumburgh Airport—from 9th to 19th, with maximum of 5 (GDJ).
Elsewhere in Shetland—recorded but details not received (RJT).
Fair Isle—1 on 11 Aug; in Sept, 1 on 7th-15th (RHD).
Sandside, Caithness—6 on 18th, and 1 on 24th-30th (JARG, DMS).
Ythan—4 on 13th, 2 on 15th, 3 on 17th and 4 on 22nd (NE).
Montrose—1 on 4th and 3 on 16th (GMC).
Eden estuary—3 on 10th, 16th, 20th and 24th, and 2 on 25th (JD, RAJ, RWS, DBT).
Fife Ness—1 on 12th-17th (PGTB).
Tyninghame—1 on 3rd, 2 on 9th, 1-3 on 16th, and 1 on 17th (TB, PJ, AFL, EMS, RWJS).
Aberlady—2 on 9th and 1 on 18th (DEB, RF, RWF, MAM, EMS, RWJS, CST).
Seafield, Leith—1 on 21st (MJE).
Dalmeny, West Lothian—1 on 16th (TCS).
Gladhouse—2 on 12th (EMS, RWJS).
Skinflats—1 on 8th, 3 on 9th, 10 on 10th, 5 on 11th, 2 on 12th, 4 on 17th, 8 on 22nd and 10 on 24th (RF, RWF, IT).
East of Grangemouth docks—45-50 on 19th (IT).
Irvine harbour, Ayr—1 on 1 Oct (TMC).
Barrassie, Troon—1 on 1 Oct, and 2 on 3 Oct (RGC, RM, GTW).
New Cumnock—4 on 13 Sept (JAB).

Numbers of **Sanderling** were more than usual in the autumn at Aberlady, Tyninghame and Barn Ness (AM); 121 were counted at Aberlady on 19th August (RSB) and over 100 on the 27th (THJ). There was one inland at Gladhouse on 30th July (EMS, RWJS).

A further spring record of **Ruff** (see 4: 514) is of one on Speyside on 7th May (DNW). Autumn records are too numer-

ous to detail but the earliest birds and largest numbers are given:

Sandside, Caithness—12 on 18 Sept (JARG, DMS).
Montrose—passage from 8 July (1) to 15 Sept, with maximum of 5 on 17 Aug (GMC).
Forfar Loch—25 or more on 2 Oct (DBT), and 16 on 4th (GMC).
Aberlady—1 on 15 July (DSt).
Gladhouse—passage from 8 Aug (EMS, RWJS).
River Cant, Paisley Moss—1 on 25 July (IG, GTW).

A **Red-necked Phalarope** was seen offshore at Fair Isle on 15th July (RHD); and at North Ronaldsay in July there were singles from 15th to 24th, two on 18th, 19th and 22nd and three on 27th (KGW). One was spinning on the sea at Mellon Udrigle, Wester Ross, on 17th September (CFHB, ADKR).

Five immature **Arctic Skuas** were chasing gulls and terns at Crinan Moss, Argyllshire, on 21st August; locally it is reported that both adults and immatures have been quite regular in Crinan harbour for the past two summers (IR).

The table in the 1966 Scottish Bird-Islands Study Cruise booklet indicates that **Lesser Black-backed Gulls** do not breed in the Shiants, though *The Birds of Scotland* says they bred there on Eilean Mhuire in 1888 and were still doing so 22 years later. At least some of the 50-60 pairs on Eilean an Tighe and Eilean Garbh in June 1967 were breeding; there were 25-30 pairs at Streanish on E. Garbh and some nests and chicks were found (LRH).

Apart from records from the Northern Isles, reports of **Glaucous Gulls** are of one between Fife and the Isle of May on 16th May (RAJ); one, given bread as it was slightly distressed, near Aultbea on 26th July (AMMF); and singles at Scrabster on 6th and 19th August (NE). At Balranald, North Uist, there were two immatures on 4th-5th July; one at least had been there since early June, and one was still there on 22nd July (MJE, AMMF, CEP, GS). Another was reported in Benbecula about 4th July (per MJE). An **Iceland Gull** was seen near Anstruther, Fife, on 9th September (MJE, MAM).

Five **Little Gulls** flew across Duddingston Loch, Edinburgh, on 9th May, the second record for the loch (DRA). At Kilconquhar there were small numbers in early July, building up to about 300 on the 23rd, but not staying as long as usual (DWO). There were 36 at Monifieth on 18th August (GMC), and one at Arbroath on 5th September (JD, RWS, DBT). Away from Fife and Angus, there were two at Strathbeg on 9th September and one on 16th (NE), and one at the Luce estuary, Glenluce, Wigtownshire (RCD).

About 40 **Kittiwake** nests at Clett Head (not listed in *Bird Study* 10: 147-179) are thought to be the first record of this

species breeding on Whalsay (JHSp).

Further spring records of **Black Terns** (see 4: 514) are from Unst, where in all there were 3 on 5th May, 6 on 6th and 5 on 7th (MS, FJW), and Kilconquhar, where there was one on 4th June (AMMF). One flew south at Tentsmuir Point on 9th July (DBT). A juvenile was at fishing nets at Waterfoot, Annan, on 20th August (AG, RTS); there was one at Loch Spiggie, Shetland, on 4th September (THJ); and one was at Kilconquhar Loch from 7th to 9th September (PGTB, MJE, MAM).

As **Common Terns** are scarce in Roxburghshire it may be worth noting two at Hoselaw Loch on 6th August and one at Yetholm Loch on 6th September (RSB). Strong southerly passage of 'Comic' and **Sandwich Terns** was observed over the Grangemouth-Falkirk area between 10th and 13th September (IT). On 15th July a Sandwich Tern was seen flying beside the road and perched on a post 5 miles south of Dalwhinnie (AGS). Other inland records are of one at Loch Leven, Kinross-shire, on 22nd July (MAM), and one at Kilconquhar Loch on 9th September (MJE, MAM).

Three **Black Guillemots** at Meikle Ross, Kirkcudbrightshire, on 24th June were proved to have bred when a young bird was seen on the sea there later, representing a further extension in Solway (RTS, RWJS, JGY). A **Puffin** egg on Fidra on 10th June provides the first breeding record for the island (EMS, RWJS).

Three single **Stock Doves** and a party of four flew south over Fidra on 28th September, but how far they had come or were going is unknown (MJE). Another spring **Turtle Dove** (see 4: 514) was at Inchdrein, where they have been recorded in other years, on 7th June (DNW), and probably the same bird was 2 miles away at Auchgourish by the Spey 3 miles NE of Aviemore next day (NH). Autumn records are:

Fair Isle—several between 7th and 24 Sept, with 4 on 11th and 14th (RHD).
Auskerry, Orkney—1 on 10 Sept (DMS).
Butt of Lewis—1 on 23 Sept (IMM).
Rothiemurchus, Inverness—1 on 1 Sept (DNW).
Acharacle, Argyll—1 on 17 Aug (GTJ).

During a heavy shower on 17th July there were 1000 **Swifts** wheeling over Vane Hill, Kinross-shire (JHSw); and on the 23rd there were 22 at 4000 ft above Lochnagar (NE). Late records are of single birds at Aberlady on 28th September (MJE), Fife Ness on the 30th (PGTB), and Aberdeen on 10th October (ADKR).

A **Kingfisher** was seen on the Endrick near Killearn, Stirlingshire, on 15th August; one is said to have been seen there

in 1966 also (JH per JMt). One was on the River Add at Kilmichael-Glassary, four miles north of Lochgilphead, for at least a week from mid September; the most recent reports for the area were of one in the same place in August 1960 and one on the outskirts of Lochgilphead three months later (IR).

There were several reports of **Hoopoes** in the second half of September: two on Whalsay, Shetland, from 19th (JHSp); one at Anstruther, Fife, on 20th (PS per DWO); one seen by two ladies at Bridge of Don, Aberdeenshire, on 26th (per RFY); and one at Mellon Charles, Wester Ross, on 28th (AWAS).

An adult **Green Woodpecker** was seen with a newly fledged young one at Mugdock Wood (2 miles north of Milngavie), West Stirlingshire, on 31st August. This is about 4 miles from Lennox Castle, where they first bred in 1959 or 1960 (2: 43), and there was a record from Craigmaddie Wood, halfway between, in 1966 (4: 320) (ENC). A **Wryneck** was on Fetlar on 31st August (RJT), and Fair Isle had them on August 27th (2) and September 3rd, 10th, 16th and 19th-22nd (all 1), with three on 18th and 24th (RHD).

There were seven **Shore Larks** on Unst on 22nd May (MS).

There were about 4000 **Swallows** at the Ythan estuary on 30th August in a fairly well concentrated flock; there had been good numbers before, but there were definitely far fewer by 31st (NE).

Two **Ravens** were seen over Ben Rinnes, Banffshire, on 12th August; they are scarce in the northeast (GFR). On the same day 45 were flying about using the updraught from a cliff at Knockan (11 miles NE of Ullapool), Sutherland (RAH, DT, JT). In unusual areas there were three **Magpies** at Strathconon, Ross-shire, on 23rd September (DCH), and one at Castletown, Thurso, on 10th June (DMS).

A party of nine **Dippers** was seen at Slateford Bridge, Edinburgh, on 10th August (ADKR). At least six **Mistle Thrushes** were on the move with early Fieldfares at Kinlochewe, Ross-shire, on 9th September (EB). A late spring record of **Fieldfare** is of one at Loch Leven, Kinross-shire, on 23rd May (JHSw). The first of the autumn was noted on 11th August and there was an extensive early arrival reported from many places from 9th September, and especially from 15th onward:

Shetland—a few odd birds early in the month, and a small passage from 20th (RJT), with 80 on Unst that day (FJW).

Fair Isle—first on 11 Aug; mainly from 10 Sept, with surprisingly early large falls of 110 on 15th and 400 on 18th (RHD).

Auskerry, Orkney—1 on 13th (DMS).

Caithness—12 at Wick, 1 at Castletown, and 2 at Stanstill, all on 17th (DMS).

Loch Shin, Sutherland—noted on 21st (AMcR).

Evanton, E. Ross—first seen on 21st (CGH).
Laide, W. Ross—3 on 19th (CFHB, ADKR).
Stac Polly, W. Ross—10 on 26th (DCH).
Kinlochewe, W. Ross—15-20 on 9th (EB).
Abriachan, L. Ness—120 on 28th (DCH).
Tomatin, Inverness—6 on 19th (THJ).
Insh, Speyside—100 flew over on 24th (DNW).
Glen Lui, Mar Forest, Aberdeen—18 flew over on 23rd (NE).
L. Leven, Kinross—1 on 19th (JHSw).
Barns Ness, E. Lothian—2 on 16th (PJ).
Musselburgh—2 on 18th (MAM).
Gryffe Reservoir, Renfrew—38 on 27th (HGC).
Yetholm, Roxburgh—1 on 24th (RSB).

In contrast to the flood of letters about Fieldfare, only a few **Redwing** have been reported:

Shetland—small parties from 20 Sept (RJT).
Fair Isle—first on 1 Sept; 35 on 18th and 200 on 27th (RHD).
Auskerry—4 on 13 Sept (DMS).
Speyside—first seen on 19 Sept, and a few thereafter (DNW).

Three **Ring Ouzels** were on Out Skerries, Shetland, between 18th and 22nd September (RJT); the first three at Fair Isle were on 17th, and numbers increased to 40 on 20th (RHD). A female **Blackbird** was seen with two or three fledglings in June near the sheep pen on the Shiants; the species is not mentioned as a breeding bird in the book kept in the bothy (LRH).

In the middle of Edinburgh a **Wheatear** was in Roseburn Park on 9th September (ATM, EHLM). Fourteen pairs of **Redstarts** nested this year on the Carron Glen slopes, Stirlingshire, in a distance of about a mile, and have definitely increased (JFB). A dead one on Canna about 17th or 18th July is the first recorded on the island (see 4: 437) (per JC). Single cock **Black Redstarts** were on Fair Isle on 16th July (RHD), and at Sumburgh, Shetland, on 27th September (DWO). There were two **Bluethroats** on Out Skerries between 18th and 22nd September (RJT); and five at Fair Isle on 18th, with between one and four until the 27th (RHD).

Further reports of **Grasshopper Warblers** may be added to the long list already published (4: 518):

Moray—1 at Hopeman on 1-4 June (ISS).
Inverness—1 singing at Insh marshes on 26 May (DNW).
Angus—1 still singing at Forfar Loch on 6 July (GMC).
Stirling—1 heard and seen at Ardinning Loch, Strathblane, on 11 May; 1 heard at Bardowie Loch on 13 May (TMC).
Jura—1 at Lealt in June and July (PJ).
E. Lothian—1 at Aberlady on 28 July (GMSE); autumn migrant at Tyninghame on 2 Sept (AM).
Renfrew—1 between Langbank and Bishopton on 31 July (GD, GTW).
Roxburgh—1 at Yetholm Loch on 14 Aug (RSB).

On Out Skerries there were **Reed Warblers** on September 4th (1), 18th-20th (2) (RJT), and 26th (1) (DC); and on Fair Isle there were singles on 10th-12th and 20th-23rd (RHD). Single **Icterine Warblers** were on Out Skerries on 4th September (WP, RJT), at Fair Isle on 22nd August and 10th-16th September (RHD), and at Fife Ness on 22nd September (DWO).

A **Blackcap** was seen and heard at Tongue, in the extreme northwest, where it is a rare species, from 21st May until at least early June (ERH). At least seven held territories in northeast Angus this summer (GMC). Passage started rather early at Fair Isle, on 3rd September, with 16 on 18th and 22 on 22nd (RHD). **Barred Warblers** are reported as follows:

Fetlar—1 at Tresta on 15th and 19 Aug (TG); 2 from 1 Sept (RJT).
Mid Yell— 1 on 1 Sept (RJT).
Out Skerries—2 on 4 Sept (RJT).
Sumburgh, Shetland—1 on 27 Sept (DWO).
Fair Isle—1-2 on 12-16 Aug; passage from 27 Aug to 16 Sept, with peaks of 3 on 27 Aug, 4 on 3rd and 10 Sept, and 5 on 12th; singles on 24th and 26 Sept (RHD).
Fife Ness—1 on 9 Sept (MJE, MAM).

A **Garden Warbler** was seen and heard from 21st May until early June at Tongue, an area for which there are few records (ERH). In northeast Angus at least 14 were holding territories (GMC). An adult **Lesser Whitethroat** was ringed at Killichonan, Loch Rannoch, on 19th August (WDC). On Fair Isle there was one on 8th August, and passage from 5th September, with a maximum of four on 18th (RHD); there was one near Rattray Head, Aberdeenshire, on 16th September (NE); and one with other migrants at Barns Ness on 13th September (AM).

As there are so few records for Roxburghshire, single **Chiffchaffs** at Yetholm Loch on 17th September and 1¾ miles north of it on 18th should be noted (RSB). In Speyside, where it is very unusual, one was singing at Insh marshes in early June (DNW). A **Wood Warbler** was heard at Reay, Caithness, throughout May (DMS). Single autumn migrants were at Fetlar on 15th-16th August (TG), Sumburgh about the 18th (DC, RE-H), and Fair Isle on 8th-9th and 26th-27th August and 15th September (RHD). An **Arctic Warbler** (subject to approval of the Rarities Committee) was on Fair Isle from 30th August to 4th September, and another on 21st September (RHD); and one was reported at Halligarth on Unst on 3rd September (FJW); and yet another on Fetlar on 12th September (KH, RJT). The first **Yellow-browed Warbler** was at Fair Isle on 14th September and they were seen most days to the time of writing (27th September), with peaks of eight on 23rd and 27th—probably the best arrival ever recorded there (RHD). In Shetland there was one on Fetlar on 12th Septem-

ber, one or two on Out Skerries from 16th, one at Aywick on 16th, and one or two about the same time at Sumburgh(RJT), where there were three to five on the 27th (DWO); they were also noted at several places on Unst, with two on 21st September and singles on 23rd-25th and 27th (MS, FJW). A little further south, one was caught at Castletown, Caithness, on 1st October (DMS).

One or two migrant **Goldcrests** were noted in Shetland from 17th September, with more on 27th (RJT), and correspond rather nicely with in-town reports of singing birds in Whittingehame Drive, Glasgow W.2, on the 24th (HGC), and in George Square, Edinburgh, on 28th (TCS).

A great increase of **Spotted Flycatchers** breeding in the Yetholm area was noted, with 26 feeding at one place on 7th September and probably about 100 in the area (RSB). A **Pied Flycatcher** at Yetholm on 6th September was the observer's first for the area (RSB). There are reports of **Red-breasted Flycatchers** in September from:

Mid Yell—1 on 23rd (RJT).
Out Skerries—1 on 16th-22nd (RJT).
Fair Isle—1 on 19th and 1 on 26th (RHD).
Fife Ness—1 on 16th (CRM, RJWS).
Tyninghame—1 on 10th (RF, BCF, RWF).

There were two to four **Richard's Pipits** at Fair Isle most days from 15th September, with a record total of eight on the 27th; and two **Red-throated Pipits** on 21st September, one of which stayed until the 25th (RHD). A **'Yellow' Wagtail** was at Riverside, Wick, Caithness, on 24th September (DMS), and a migrant cock *flavissima* was at Gadloch, Lanarkshire, on 13th August (WWy).

A **Great Grey Shrike** on Unst on 21st September chased a Yellow-browed Warbler for several minutes until it took refuge in the garden of a croft (FJW). A **Woodchat Shrike** was on Fair Isle on 13th July, subject to Rarities Committee approval (RHD). Single **Red-backed Shrikes** were on Fair Isle on four days between 9th and 18th September, with two on the 11th (RHD); and at Fife Ness there was a male on 22nd and a 1st-winter bird on the 23rd (DWO).

At Ellon, Aberdeenshire, a **Hawfinch** was rescued from a cat on 14th September (GFR). **Goldfinches** increased greatly in the Yetholm area; towards the end of August and early in September the residents were joined by others, and on 10th September there were 70, mostly juveniles, in a flock, and probably 130 in the area. One pair was still feeding newly-fledged young on 23rd September (RSB). At the Esso installation at Bowling, Dunbartonshire, there were 12 **Siskins** in a flock with Greenfinches, Reed Buntings and House

Sparrows on 25th September (TMC); and at Montgreenan, Ayrshire, there was a flock of 30 on 15th September (DNW). Two hundred **Redpolls** at Insh marshes on 25th September could have been local, but are thought more likely to have been migrants (DNW), a view perhaps reinforced by a record of four at Brims Ness, Caithness, two days earlier (DMS).

Scarlet Grosbeaks were at Fair Isle on August 29th (1), and September 9th (1), 10th (4), 11th-12th (2), and 18th-27th (1-2, but 3 on 24th) (RHD). Reports of **Crossbills**, presumably immigrants, in July, are of 12 females and immatures in pines near Westloch, St Abbs, Berwickshire, on 8th (DAIB); one over Vane Farm, Kinross-shire, on 22nd (JHSw); and at least 27 near Carnoustie, Angus, on 27th (JD). A female **Brambling** was on Unst on 27th August (FJW), and two were on Out Skerries on 18th September (RJT).

An unringed cock **Red-headed Bunting**, presumably an escape like all the rest, was on the foreshore at Skinflats on 5th August (MCC, JP). At Fair Isle there was a hen on 23rd-28th August and a cock on 9th-21st September (RHD). Subject to Rarities Committee approval there were two **Yellow-breasted Buntings** on Fair Isle on 10th September, one staying until 12th, and another on 18th-19th (RHD). Single **Ortolan Buntings** were there on 5th-7th and 20th-26th September, and **Little Buntings** on 17th, 19th and 26th (RHD); one of the latter (subject to approval) was on Out Skerries between 18th and 22nd (RJT).

There was a **Lapland Bunting** on Out Skerries on 14th September (WP), and one in sand dunes 2 miles north of Brig o' Don, Aberdeenshire, on 4th October (ADKR). Fair Isle had one on 6th September, five on 7th, and one or two until the 25th (RHD). A juvenile **Snow Bunting**, able to fly freely but apparently Scottish-bred, was feeding at 2500 ft on Bheinn Eighe on 28th July below a massive scree (there had been over 500 Snow Buntings on the next hill in March); no adults were seen (ENH). Autumn arrival is reported at:

Shetland—one or two parties from mid Sept (RJT).
Fair Isle—8 on 4 Sept, building up to 70 on 8th were the first (RHD).
Auskerry—1 on 3 Sept (DMS).
Butt of Lewis—first one in NE gale on 20 Sept (WAJC), and 40 by 23rd (IMM).
Fife Ness—2 from 9th to at least 13 Sept (PGTB, MJE, MAM, DWO).

Earlier observations—before 1st May 1967

A drake **Garganey** was on the marshes near Twechar, Dunbartonshire, on 5th April (cf. 4: 510) (JJCH, EH). There was a **Little Gull** at Ackergill, Wick, Caithness, on 10th April, the first record for the county; others are said to have been seen in April in 1958, 1965 and 1967, but details that would enable

the records to be accepted have not been received (RSd, DMS).

We do not usually pick up arrival dates after the main report on the spring to which they refer, but the following notes expand or fill gaps in data in the last issue of *Scottish Birds*. Further April **Cuckoos** were one in Glen Kinglas, Argyllshire, on 23rd, and three at Craigend Castle, near Milngavie, on 29th, a normal first date for the area. Several **House Martins**—earlier than any already noted—were hawking insects over L. Bowie, near Dumbarton, on 10th April. Two male and one female **Whinchats** by L. Craignish, Argyllshire, on 23rd April are also the earliest reported. Single **Willow Warblers** seen and heard at Culzean Castle, Ayrshire, on 5th April, and at Benmore Gardens, near Dunoon, Argyllshire, on 7th, are additional to the sole early April record already given. A **Chiffchaff** was seen and heard at Culzean on 5th April (TNC).

A **Chiffchaff** was heard a mile south of Forres on 23rd April; the observer previously noted one in Morayshire in 1956 a mile east of Forres, which seems to be the first in the county (ISS). **Snow Buntings** were reported as unusually numerous on the Cairngorm tops in late April (DNW).

General observations—behaviour etc.

A 14 lb pike from a loch in Wigtownshire in May 1966 was found to contain an almost fully grown **Grey Lag Goose** gosling (JGY). The remains of an apparently fully-grown **Moorhen**, with green legs, were found inside a 10¼ lb pike caught near Dumfries on 29th July (DSk).

Near Sandmill, Wigtownshire, **Moorhens** have been seen feeding far out on a large tract of sands exposed at low tide, up to ¼ mile from the nearest vegetation. Eight on 27th August, including four full-grown juveniles, was the highest count. If disturbed they half ran, half flew, to a coastal marsh nearby (RCD).

On 1st July in a wood between Kirkliston and Winchburgh, West Lothian, a **Woodcock** rose from beneath a tree and flew off slowly and clumsily, without zig-zagging, about three feet from the ground. The legs were dangled and held close together, with a brown spherical protruberance, presumed to be a chick, pressed against the body between the thighs. It pitched in cover a short distance away. A perfectly camouflaged Woodcock chick remained under the tree. Unfortunately, the observer was distracted from fuller investigation by the silent explosion of a brood of Spotted Flycatchers from a nest in a tree he was passing, and by the time these were reunited with their parents the remaining Woodcock chick was gone (RSB).

On 16th June at the broch of Dun Dornadilla, Sutherland, a **Curlew** repeatedly flew back and forth across the Strathmore river calling. Eventually two adults flew to the far bank and started calling to three chicks about two weeks old, which jumped off the three-foot river bank, disappeared under the water, and bobbed up like corks. The river was two feet deep and quite fast. The birds resembled ducklings as they made slow steady progress, encouraged by the calls of their parents, one of which flew over, shepherding them to a sandy stretch on the other side, where they were led away into the marsh, none the worse (TMC).

On 12th August a Curlew on mudflats at Loch Fleet, Sutherland, ate 338 marine worms (probably lugworms) in 45 minutes with hardly a pause. During this period the bird covered a strip about 40 yards long. Generally worms were secured about every third probe. At times it plunged its bill into the mud right to the base, but occasionally the worms, which appeared to be 1-2 inches long, were taken almost on the surface. The bird made droppings after consuming the 156th, 170th, 214th and 338th worms, and finally started to preen (DB, DM).

A **Great Skua** with a chick on the ground at Handa on 3rd July was seen mobbing **Oystercatchers** over the breeding site; two were brought down and attacked on the ground, the one escaping and the other being bitten on the neck and killed (DCH).

On 27th May a **Common Gull** was found incubating a nest on a flat branch of a Scots pine on an islet in a loch in Southeast Sutherland. The bird was flushed and watched back but the contents of the nest, about 30 feet above the water, and its ultimate fate, are unknown (DM).

On the evenings of 7th and 8th September, at Yetholm, Roxburghshire, a **Short-eared Owl** was watched hiding short-tailed field voles, which it had caught, under tussocks of grass beneath a hawthorn hedge—two on the 7th and one on the 8th. The voles in each case were gone early the following morning. The *Handbook* (and *The Birds of Scotland*) records the formation of larders by autumn migrants, but this was a resident, apparently the only one in the area (RSB).

On 29th September at the Loch of the Lowes, Perthshire, a **Rook** was watched playing with what seemed to be a small clump of grass, or perhaps wool; the item was often carried in the bird's foot, both in flight and at rest, but was frequently transferred to the bill, again both in flight and at rest. The whole game, which lasted for several minutes before the bird dropped the item, was accompanied by weird, falsetto 'Rook-talk' (MJE, GW).

Reviews

The Snow Bunting. By Desmond Nethersole-Thompson. Edinburgh and London, Oliver & Boyd, 1966. Pp. xii + 316; 14 plates (18 photographs, one in colour) and 11 text figures. 22¼ x 14¼ cm. 45/-.

Although Desmond Nethersole-Thompson has lived in Scotland for over 30 years, to most Scottish birdwatchers he has been virtually unknown except in name as a "nasty word" in ornithology, a fire-eating iconoclastic anti-royalist and bitter antagonist of the Establishment and all orthodoxy. Only those who have taken the trouble to find out for themselves are aware that the admittedly unattractive exterior belies a sensitive character of great sincerity and personal charm.

His outstanding ability as a field naturalist with a particular bent for behaviour studies has been well demonstrated in *The Greenshank* and in the various contributions to Bannerman's *The Birds of the British Isles*, and whereas Inverness County Council may well miss this enzymic personality more than it cares to admit, Nethersole-Thompson's decision to abandon politics and devote his time to recording and publishing should certainly be welcomed in ornithological circles.

The Snow Bunting brings together the fruits of a vast programme of fieldwork carried out by the Nethersole-Thompson family under the most arduous, sometimes almost unbearable, conditions in the Cairngorm mountains, during which no less than 263 nights were spent under canvas. The author's personal contribution then, consists of accounts of his studies of Snow Bunting pairs and individuals, with their nest histories, found during this period; but this is not a book solely on the species in Scotland, for he has synthesised material dealing with all aspects of Snow Bunting biology throughout its total world range.

This treatment demonstrates many behavioural differences between arctic and Scottish birds, but these differences are certainly not attributable to the existence of a distinct Scottish population. In fact, available evidence suggests that Scottish breeding stocks are derived from a mixture of Greenland and Scandinavian birds. Territorial behaviour, for example, differs between Greenland and Scotland, where territories are much less clearly circumscribed, and may also differ in various parts of the arctic; but it is surprising to find in Spitsbergen, whose birds are so well documented, that Snow Bunting territory appears to be quite unstudied.

Snowbirds seem to have been commoner in Scotland at the end of the last century, during a series of cold and prolonged winters, but the author believes that colonists are more likely to nest following periods of severe climate in northern Europe than following hard springs in the Scottish Highlands. Much has been written recently on the correlation between the spread northwards of bird species and the amelioration of the arctic climate, but in the present book an interesting though highly speculative comparison is made between severe winters in the Iceland seas, the Baltic and Denmark Sound, the occurrence of breeding Snow Buntings in Scotland and the nesting in Scotland of other boreal birds—e.g. Long-tailed Duck, Green and Wood Sandpiper, Brambling, Whooper Swan, Whimbrel, Redwing. This chapter is well worth the attention of anyone interested in changes in northern bird faunas.

Two useful chapters (one by Derek Ratcliffe) describe the habitat of the Snow Bunting on a world scale and in Scotland, but little is said about flocks in the winter months. One curious omission (unless the re-

viewer has overlooked it) is John Berry's account of a fantastic immigration at Strathy Point in November 1931 (*Scot. Nat.* 1932: 39-42).

The book contains a great deal of personal reminiscence and historical accounts of nest-hunting in general and Snow Buntings' nests in particular, without which it could have been smaller and cheaper, but there are many to whom the historical side of ornithology is of absorbing interest. But the reviewer cannot excuse the statement that "William MacGillivray ... as a poor young student ... is said to have tramped from Aberdeen to London." MacGillivray's walk to London is a well authenticated historical fact, undertaken after he had abandoned the study of medicine for botany and zoology.

The Snow Bunting tells a great deal about *Plectrophenax nivalis* and also a great deal about Desmond Nethersole-Thompson: it is to be thoroughly recommended to anyone who is interested in either. It also does a great service in emphasising the deficiencies in our knowledge of the former (which the author is the first to point out) and should be carefully read by any ornithologist contemplating a visit to the arctic who is in search of subjects for study.

IAN D. PENNIE.

Mammals of Britain—their Tracks, Trails and Signs. By M. J. Lawrence and R. W. Brown. London, Blandford, n.d. [1967]. Pp. 223; plates (32 in colour) and line drawings throughout. 21½ x 14¾ cm. 30/-.

This book will be valuable to ornithologists, for reasons given below, and the ornithologist reader is therefore asked to read on. It is the best book on the tracks, trails and signs of British mammals yet published. *The Handbook of British Mammals*, published by the Mammal Society of the British Isles in 1964, gave little information on tracks or skulls, and this book will fill the gap. The aim is to provide information that will allow people to identify species of mammals without actually seeing them —from tracks, droppings, signs or bony remains. It will therefore be of great value to ornithologists, who are often badly puzzled when trying to decide, from skull remains and teeth, which species of mammals occur in the pellets of owls or other birds of prey.

The introduction tells how to make plaster casts of tracks. The first two-thirds of the book describe the distribution, habits, habitat, track, trail, signs and dwelling place of each species of British mammal. Scottish readers will detect a number of errors, such as the incorrect information about reindeer distribution, or the grey squirrel being restricted to the Central Lowlands and "the glens" in Scotland, or the distribution of the wild cat in northeast Scotland. However in general this section is good, and there are useful distribution maps and many good photographs in colour and black-and-white. The best part of this section is the illustration of tracks. These drawings are particularly useful because they show variations in the type of track according to whether the animal is walking or running, on soft mud, snow or hard ground, or landing from a height, and whether it is a fore or hind foot, left or right. The tracks of closely-related species are illustrated side by side. The only criticism here is that the scale is sometimes given as "reduced" or "greatly reduced," rather than as an exact fraction. The last third of the book is a detailed section, describing skulls and teeth patterns and illustrating these, with a useful key to identify species by special features of the skulls and teeth. Several practical examples are given of identifying the material in owl pellets.

ADAM WATSON.

Tracks. By E. A. R. Ennion and N. Tinbergen. Oxford, Clarendon Press (Oxford University Press), 1967. Pp. 63; 122 photographs and coloured drawings. 28 x 21½ cm. 25/-.

This is an enchanting picture book, and more. Tracks is a comprehensive term not restricted to footprints. It includes records of locomotion by paws, claws, flippers or other means, but shows the purpose of these movements in hunting, feeding and play. Tinbergen stresses the importance of early morning work on nocturnal animals' tracks, when the slanting sun shows each print in sharp relief and they are as yet unblurred. His sensitive photographs are excellent. Sand prints show remarkable clarity of detail, and beauty of pattern is visible again and again.

The first photographs are straightforward footprints of a trotting hedgehog, a plodding Shelduck, a wriggling adder. The tracks cross one another, and changes in them reveal events. It is with these more complex event-photographs that Ennion's sketches come into their own, and show exactly what happened. Sometimes the sketch is superimposed on the track photograph, as the leaping rabbits, or the Oystercatcher which turned into the wind and took off. Sometimes the bird or mammal picture is shown separately, on the same page as the track photograph. Parent Shelduck with their brood, and a grand one of a fox suddenly sitting down to scratch, are instances. The artist must have enjoyed choosing his attitude of suspended movement exactly to fit the tracks.

Mammals, birds, reptile and amphibian are illustrated, the scale varying from aerial views of migrating African wildebeeste to a poignant little photo-story of a weevil which, unlike Bruce's spider, laboured so hard but failed. Is it unfair to wish that the common toad had been included for comparison with the restricted though photogenic natterjack's sandprints, and that other small rodents as well as one speeding woodmouse had been allowed to show their paces? Probably, for this is not a systematic book, but a delight to examine, and a stimulus to look more closely at the evidence left in tracks of snow, mud and sand.

WINIFRED U. FLOWER.

The Penguin Dictionary of British Natural History. Penguin Reference Books series. By Richard and Maisie Fitter. Harmondsworth, Penguin, 1967. Pp. 348; figures. 18¼ x 11 cm. Paperback, 8/6.

During the period when I have had this dictionary and have referred to it for information, I have rarely been disappointed. Naturally, it does not profess to contain every species, but the selection is very wide, both animal in its broadest sense and botanical, and included also are definitions of geological, meteorological and ecological terms which occur in scientific journals today. One is occasionally tempted when reading to skip such words with but a hazy idea of their exact meaning; here is the correct interpretation speedily available. It is pleasant to see the S.O.C. defined as "the national bird-watching organization of Scotland," and to find included such homely words as Pink-foot and Cushie-Doo.

Under Isopoda there is a small misprint where "woodlice or skaters" are mentioned instead of "slaters," and under Pond Snail, *L. trunculata* should read *L. truncatula*, but these only serve to indicate the wide field covered and how accurate the information is.

There is appended a checklist of several thousand scientific names, which should prove very useful.

This dictionary should be conveniently placed in every naturalist's private library for it will be in frequent use, and can be recommended even as a reading book for the odd moment.

A. J. SMITH.

Letter

SIR,

The "Carrick" gull and others

I read the article on the *"Carrick"* gull (*Scot. Birds* 4: 493-502) with interest. During my stay in Stornoway from March 1963 to September 1965 I identified three different albino Herring Gulls and seven Iceland Gulls. The first albino Herring Gull was obvious—an adult on 18th March 1963 with an almost white mantle and very pale grey wingtips. The second, on 15th March 1964, was also an adult, with pure white plumage and wingtips so pale that the grey could be seen only at close quarters. Both these birds were in the vicinity of Stornoway for a long while. The third albino was an immature on 26th September 1964, with wholly dark bill and eye and pure white plumage, but at close range showing some very faint mottling at the end of the tail.

The Iceland Gulls were in various stages of immature plumage. The most adult was one at Laxdale estuary on 28th February 1964. It appeared to be at a stage of plumage not described by G. T. Kay (*Brit. Birds* 43: 399-402); the mantle, wings and tail were as an adult, but the head and underparts were as an immature. With all the Iceland Gulls that I have seen I looked first at the head, finding the facial 'expression' and the more delicate head and bill an excellent guide to identification. In my opinion the bird illustrated in *Scottish Birds* (pl. 48) is without doubt an albino Herring Gull.

I have also a record of an albinistic Common Gull at Loch Stiapavat, Lewis, on 24th February 1964, an immature with wings pure white from the tip to the carpal joint; and one of an albino Black-headed Gull on the Ythan estuary, Aberdeenshire, on 12th and 24th July 1967, a bird with pure white plumage and faint grey-brown patches on the scapulars and face.

NORMAN ELKINS.

(Ian M. MacLean reports that an albino Herring Gull was still to be seen at Stornoway in mid September 1967 and that one, if it was always the same one, has been seen regularly over recent years by W. Matheson, who saw it feed a young bird in the harbour in 1966.—ED.)

The Scottish Ornithologists' Club

Balance Sheet as at 30th June, 1967

		Year to 30/6/67	Year to 30/6/66
As at 30th June, 1966		£2435 15 8	£2287
Add : Excess of Income over Expenditure for year		322 13 6	149
		£2758 9 2	£2436
Made up of :			
Cash: In hands of Secretary		£8 9 10	£14
In Royal Bank of Scotland No. 1 Account ...		87 15 1	220
In Royal Bank of Scotland No. 2 Account ...		13 1 8	61
In Edinburgh Savings Bank		127 12 5	358
In account with Scottish Ornithological Cruise Ltd.		—	66
		£236 19 0	719
Bookshop stock at valuation		597 0 0	666
Tie and Badge stock at valuation		225 0 0	—
Debts due to Club		300 5 4	140
		£1359 4 4	1525
5% Defence Bonds		500 0 0	500
Loan to Edinburgh Corporation at 6¼% repayable 1968		500 0 0	500
Loan to County Burgh of Wigan at 7¼% repayable 1968		600 0 0	—
Loan to Matlock Urban District Council (now at 5⅜%) repayable at 7 days		3500 0 0	—
Safeguard Industrial Investments Ltd.—700 Ord. Shares of 5/- each at cost		507 19 11	508
		£6967 4 3	3033
Less :			
Subscriptions paid in advance	£79 11 11		71
Donations from the late Miss E. A. Garden—not yet expended	28 8 1		29
Debts due by Club	378 0 8		384
Amount due to Endowment Fund ...	13 1 8		113
Amount due to Scottish Ornithological Cruise Ltd. in Liquidation	3709 12 9	4208 15 1	597
		£2758 9 2	£2436

Revenue Account for the year ended on 30th June, 1967

	Year to 30/6/67	Year to 30/6/66
INCOME—		
Subscriptions received for year	£1966 5 0	£1772
Income Tax recovered on covenanted subscriptions	248 5 2	216
Dividends and Interest received	282 8 6	85
Surplus on Bookshop (Sales £4468)	1151 8 1	643
Sale of "Scottish Birds" to non-members	124 5 5	88
Sundry Sales less sundry purchases	16 0 3	49
Contribution from the Scottish Wildlife Trust towards facilities granted by the Club	—	16
Contribution from the Scottish Ornithological Cruise Ltd. towards facilities granted by the Club	27 0 0	96
Donations received	85 14 2	59
	£3901 6 7	£3024
EXPENDITURE—		
Branch Expenses including lectures	£393 5 3	£310
Travel Expenses of Council Members and of Delegates to Conferences	48 17 3	66
Secretarial Services	1535 17 11	1142
Office Expenses	396 13 11	268
Scottish Centre for Ornithology and Bird Protection: Club's share of running expenses including £225 Contribution to the House Fabric Fund	454 10 3	317
Cost of Books purchased for Library	63 1 4	82
Cost of publishing "Scottish Birds" (less advertising revenue £263)	605 15 11	523
Cost of publishing "Foula" supplement	—	149
Net cost of Annual Conference	64 8 9	2
Subscriptions paid	16 2 6	16
	£3578 13 1	£2875
Excess of Income over Expenditure carried to Balance Sheet	322 13 6	149
	£3901 6 7	£3024

House Fabric Fund—Summary of Accounts for year to 30th June, 1967

RECEIPTS—	Year to 30/6/67	Year to 30/6/66
Balance as at 30th June, 1966	£202 3 3	£162
Year's rent from Royal Society for Protection of Birds	100 0 0	100
Year's rent from Mr and Mrs George Waterston	100 0 0	100
Annual Contribution from S.O.C. Revenue Account	100 0 0	100
Special Contribution from S.O.C.	125 0 0	—
Miscellaneous Interests	5 4 6	5
	£632 7 9	467

EXPENDITURE—				
Repairs and maintenance (including roof repairs—£275)			378 17 11	69
Property Burdens			212 5 1	181
Insurance			15 3 7	15
			£606 6 7	265
At credit of account with Fraser, Stodart & Ballingall, W.S.	£0 10 0			
On deposit with Dunedin Building Society	25 11 2		26 1 2	202
			£632 7 9	467

Note : The balance of £26, 1/2 includes £18, 15/11 unexpended from the Harvey Donation.

ENDOWMENT FUND

(the free annual income of which is available for the advancement of ornithology)

Revenue Account for the year ended 30th June, 1967

	Year to 30/6/67	Year to 30/6/66
INCOME—		
Interest and Dividends received (gross)	£115 9 11	£113
EXPENDITURE—		
Grant to the R.S.P.B. for the Vane Farm Reserve	100 0 0	—
Unexpended Income for the year	£15 9 11	113

Balance Sheet as at 30th June, 1967

Endowments as at 30th June, 1966		£2074 19 6	£2000
Additions during year—A. C. Phillips		5 0 0	75
		£2079 19 6	2075
Unexpended income at 30/6/66	£113 1 8		
Add : Unexpended income of current year	15 9 11	128 11 7	113
		£2208 11 1	2188
Made up of :			
£1151 3½% War Stock at cost		£1000 0 0	1000
976 Units of the Equities Investment Trust for Charities at cost		1000 0 0	1000
On Deposit Receipt		—	75
In Royal Bank of Scotland Deposit Account		195 9 5	—
Due by Club's main funds		13 1 8	113
		£2208 11 1	2188

EDINBURGH, 12th September, 1967.—I have audited the foregoing Revenue Accounts for the year to 30th June, 1967, and the Balance Sheet as at that date. I have accepted as correct the Subscriptions and other receipts shown as received in the Books and the value placed on the Bookshop Stock. Subject to this I certify that in my opinion the foregoing accounts are correctly stated and sufficiently vouched.

(Signed) ARTHUR WALKER, Chartered Accountant.

REPORT OF COUNCIL

Your Council submits the following Report for the year 1966/67:

Membership By the end of the session, Club membership had reached 1787. An increased number of new members was enrolled, 325 as compared with 285 in 1965/66. This was due in part to new subscriptions received on the Cruise. There was an increase in resignations and lapsed subscriptions, 166 as compared with 145 the year before, so that the total increase for the year was 159, continuing our steady growth in membership. A table of membership figures for the past six years is given below:

	31/8/62	31/8/63	30/6/64	30/6/65	30/6/66	30/6/67
Ordinary	918	1062	1194	1263	1373	1524
Junior	181	195	198	222	252	259
Honorary	4	4	3	3	3	4
	1103	1261	1395	1488	1628	1787
Increase	68	158	134	93	140	159

The number of Deeds of Covenant signed by members for their subscriptions rose from 228 to 262, representing 295 subscriptions and contributing £249 to the income of the Club. Members whose covenants completed the seven years at the end of the session have been invited to renew them for a further period. The Council thanks those who have already signed covenants, and invites all members to take advantage of this method of increasing the value of their subscriptions.

Honorary Member At the Annual General Meeting in 1966 the Council had great pleasure in recording the election of Sir Landsborough Thomson as an Honorary Member of the Club.

Business of Council Five meetings of Council were held during the session. A special Committee, appointed under the Chairmanship of Dr W. J. Eggeling, examined and reported on the planning of Club resources, including staffing, accommodation and storage space. The Committee submitted their final report to Council in May 1967 and is now dissolved. Council considered and accepted their recommendations, which covered a wide range of Club activities and requirements, and included the allocation of funds from the Cruise surplus.

A donation of £100 was made out of the Endowment Fund to the R.S.P.B. Vane Farm Reserve. The Council also proposed that there be a Life Membership subscription.

One of our Honorary Presidents, Mr George Waterston, continued to represent the Club at meetings of the British Section of the International Council for Bird Preservation, and Sir Landsborough Thomson accepted the Council's invitation to succeed Dr John Berry as the other representative.

Scottish Bird Islands Study Cruise Administration in connection with the conclusion of Cruise affairs continued into the autumn. A note of the Cruise was included in the last Report of Council (see *Scottish Birds* 4: 329) and a fuller account of it, published in the winter number of the journal (*Scottish Birds* 4: 272-286), was sent to all passengers who were not already members of the Club.

In July 1967, just after the end of the financial year, the Limited Company "Scottish Ornithological Cruise Ltd," formed in connection with the Cruise, was dissolved by voluntary liquidation. The funds remaining amounted to £4202 from which, on the recommendation of the guarantors, grants totalling £450 were made to the Fair Isle Bird Obseravtory Trust (£250), the Isle of May Bird Observatory (£100), the National Trust for

Scotland (£50) and the Scottish Wildlife Trust (£50), leaving £3752 for the Club's own use. £1000 of this has been laid aside by Council for the Club Endowment Fund and a similar amount for the House Fabric Fund, £962 was approved for expenditure on additional storage shelving, renovation of a packing room, new office equipment, library binding and a bookcase showcase. The remaining £790 has been added to the accumulated surplus of the Club.

Annual Conference The Nineteenth Annual Conference and Annual Dinner of the Club, held in Dunblane, was attended by over 250 members and their guests. Lectures on irruptive migrations and range changes of European birds were given by Dr Staffan Ulfstrand (University of Lund, Sweden), Mr R. K. Cornwallis and Mr Stanley Cramp, and films were shown.

Branches A full programme of lectures was given in eight Branches. The Thurso Group continued to meet regularly and sponsored one public lecture. The annual excursion to the Solway goose grounds took place as usual, much assisted by the office-bearers and members of the Dumfries Branch. Local excursions were organised by all Branches during the summer.

Council considered a request to establish a new Branch or Group in the Stirling area. The response to a questionnaire sent out to members was sufficient to justify the formation of a Group on a trial basis. It will meet in Stirling in the coming winter under the interim Chairmanship of Mr T. D. H. Merrie.

"Scottish Birds" Four numbers of the journal were published during the year. Copies were sent out regularly in exchange or by subscription to 90 libraries at home or overseas.

Club Library The Library Committee met several times to consider the scope of the Library and its requirements. It made recommendations to Council regarding the binding of back runs of important journals, for which a special allocation has now been made by Council. The Committee also recommended new arrangements for lending books from the duplicate section and for borrowing by junior members (see *Scottish Birds* 4: 464).

Council again thanks those who have generously presented books, journals and reprints; these have been a valuable addition to our collection.

Scottish Bird Records Committee The Committee met once, under the Chairmanship of Mr D. G. Andrew. Its annual Reviews will continue to be published in *Scottish Birds*.

Bookshop Sales of books increased considerably. A very large number of orders resulted from the Cruise, when books to the value of £1000 were sold. The Cruise led also to regular orders from several overseas societies. Wider advertisement by the distribution of booklists has attracted further custom and it is hoped that with the continuing support of members, purchasing books through the Bookshop, the revenue will continue to show an increase this coming year.

Book displays were taken to the annual conferences of the British Trust for Ornithology and the British Ornithologists' Union, and to the RSPB/USPB Meeting in Northern Ireland. Council thanks these bodies warmly for the assistance this gave to publicity and sales.

Scottish Centre Facilities were again made available for informal discussion groups, meetings of the Young Ornithologists' Club, and meetings of the Fair Isle Bird Observatory Trust and the Isle of May Bird Observatory and Field Station Committee. Many enquiries were dealt with from British and overseas visitors.

Alterations to the Centre have included new shelving in the basement for stocks of *Scottish Birds* and stationery items, the reconditioning of a cellar to provide a packing room for the Bookshop, and the installation of a new hall showcase affording more adequate storage for new books.

Acknowledgments In conclusion, Council wishes to record its sincere thanks to all those who have helped the Club so freely throughout the session, by covenants, donations, lectures, Branch organisation, editorial assistance, service on special Committees, and in many other unseen and useful ways.

For the Council, W. J. EGGELING, President.

THIRTY-FIRST ANNUAL GENERAL MEETING OF THE CLUB

The 31st Annual General Meeting of the Club was held in the Hotel Dunblane, Perthshire, on Saturday 28th October 1967 at 6 p.m. Dr W. J. Eggeling, President of the Club, presided over an attendance of over 120 members.

Apologies Apologies for absence were received from Dr and Mrs D. A. Bannerman, Dr and the Hon. Mrs John Berry, Dr David Boddington, Dr G. M. Dunnet and Professor and Mrs V. C. Wynne-Edwards.

Minutes The Minutes of the thirtieth Annual General Meeting, held in Dunblane on 22nd October 1966, were approved and signed.

Report of Council The Report of Council for the past session, presented by the Chairman, was adopted.

Accounts The Accounts for the past session, presented by the Hon. Treasurer, were approved.

Appointment of Auditor Mr Arthur Walker, C.A., was re-elected Auditor for the ensuing session.

Election of Hon. President Proposing the election of Sir Arthur Duncan as an Honorary President of the Club, the Chairman said that Sir Arthur had given great service to the Club as a founder member and first President, and to the Branch in his own area of Dumfries. His part in establishing the Fair Isle Bird Observatory, and as Chairman of the Nature Conservancy in Scotland, was widely known, but few members knew that without his support as a guarantor of the Scottish Bird Islands Study Cruise, this enterprise might not have taken place. The meeting unanimously endorsed his election.

Election of new Members of Council In the absence of any other nominations, Professor M. F. M. Meiklejohn and T. D. H. Merrie were elected as new Members of Council in place of C. K. Mylne and Arthur J. Smith who were due to retire by rotation. The Chairman thanked the retiring Members for their service to the Council.

Life Membership Subscription The meeting approved the recommendations of the Council for a Life Membership subscription and the proposed amendment to the Constitution of the Club to replace 3. MEMBERSHIP (e), as follows:

"There shall be no entry fees. The Annual Subscription shall be 25s; or 7s 6d in the case of Members who are under 21 years of age, or in the case of University Undergraduates who satisfy the Council of their status as such at the time at which their subscriptions fall due in any year. The Life Subscription shall be £50. Married couples shall be eligible for Joint Membership at an Annual Subscription of 40s or a Life Subscription of £75, and shall enjoy all the usual privileges of Membership with the exception that they shall receive only one copy of *Scottish Birds* (Club journal), and any other literature circulated by the Club, between them."

Scottish Bird Report At the invitation of the Chairman, A. T. Macmillan, Editor of *Scottish Birds*, introduced plans for a Scottish Bird Report, starting in 1968, and for the appointment of Local Recorders throughout the country and appealed for the support of all members of the Club. On the motion of George Waterston, a special tribute was paid to the Editor and his assistants for giving so much of their spare time to the journal, and in particular to P. J. B. Slater for compiling the Current Notes up to the present time. ,

Votes of Thanks The Chairman moved a warm vote of thanks to the Conference lecturers, exhibitors, excursion leaders, projectionist, staff and others who had helped with the organisation. The meeting closed with a hearty vote of thanks, proposed by Dr I. D. Pennie, to the Chairman, Dr Eggeling, and to Donald Watson, Vice-President, who had taken his place at short notice during the first part of the Conference.

COUNCIL AND OFFICE BEARERS OF THE CLUB FOR SESSION 31

Hon. Presidents : David A. Bannerman, O.B.E., LL.D., Sc.D., F.R.S.E.; Sir Charles G. Connell, W.S.; Sir Arthur B. Duncan; Rev. John Morell McWilliam, M.A.; George Waterston, O.B.E., F.R.S.E.
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Vice-President : A. Donald Watson.
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Secretary and Treasurer : Mrs George Waterston.
Editor of "Scottish Birds" : A. T. Macmillan, C.A.
Assistant Editors of "Scottish Birds" : D. G. Andrew, P. J. B. Slater, Dr T. C. Smout.
Business Editor of "Scottish Birds" : Dr T. C. Smout.
Council : William Brotherston, R. G. Caldow, Dr David Jenkins, H. A. Maxwell, Prof. M. F. M. Meiklejohn, T. D. H. Merrie, J. H. B. Munro, G. L. A. Patrick, R. T. Smith, Miss V. M. Thom.
Branch Representatives to Council : J. E. Forrest (Dundee); Miss F. J. Greig (Aberdeen); S. L. Hunter (Ayr); J. K. R. Melrose (Dumfries); A. L. Ogilvy (Glasgow); Miss O. T. Thompson (Edinburgh); J. S. Wiffen (St Andrews).

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Ayr : Chairman, S. L. Hunter; Vice-Chairman, A. G. Stewart; Secretary, Dr M. E. Castle; Committee, Miss M. S. P. Gibson, Miss J. E. Howie, T. B. Kay, Mrs M. Y. Macgregor.

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Thurso : Chairman, Dr P. M. McMorran; Vice-Chairman, M. K. Goodchild; Secretary, D. M. Stark.

SCOTTISH BIRD RECORDS COMMITTEE

Chairman : D. G. Andrew.

Committee : A. G. S. Bryson, Dr J. W. Campbell, Sir Arthur Duncan, Dr W. J. Eggeling, A. T. Macmillan, Prof. M. F. M. Meiklejohn, Dr I. D. Pennie, Kenneth Williamson, George Waterston, Prof. V. C. Wynne-Edwards.

LIBRARY COMMITTEE

Dr W. J. Eggeling (Convener), Ritchie Seath (Hon. Librarian), A. T. Macmillan, Dr I. D. Pennie, George Waterston.

HONORARY MEMBERS

Clyde Bain, Henry Boase, P. W. G. Gunn, Sir A. Landsborough Thomson.

BRANCH WINTER EXCURSIONS

Ayr : Excursions will take place on Saturday 6th January; Saturday 3rd February; Saturday 2nd March; and Saturday 6th April. Details will be announced at the evening lecture before each excursion, or members should contact the Secretary, Dr M. E. Castle, 15 Glenpark Place, Ayr. Tel. Alloway 41828.

Dundee : Excursions will take place on the following dates, leaving at 10 a.m. from the City Square.

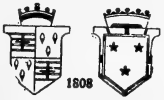
17th December 1967—Stormont Loch.
21st January 1968—Tayport and Morton Lochs.
18th February 1968—Thriepley and Long Lochs.
17th March 1968—Cameron Loch area.
21st April 1968—Rescobie and Balgavies Lochs.

WEEKEND EXCURSION TO DUMFRIES

The weekend excursion to the Solway goose grounds has been arranged with the County Hotel, Dumfries, from 9th to 11th February 1968.

Accommodation: inclusive terms £5.5.0, inclusive of gratuities, as follows—bed on Friday 9th; breakfast, packed lunch, dinner and bed on Saturday 10th; breakfast and packed lunch on Sunday 11th. Members should inform the hotel in advance if they require dinner on Friday night (extra).

Members may bring guests and should book direct with the Manager, County Hotel, Dumfries (Tel. 5401), notifying him that they are attending the Club excursion. It is advisable to bring warm clothing, gum boots if possible, and thermos flasks.



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Notice to Contributors (revised 1st December 1967)

1. General notes (not of sufficient importance to be published on their own as Short Notes) should be sent to the appropriate local recorders for inclusion in their summary for the annual Scottish Bird Report, not to the editor. A list of local recorders is published from time to time, but in cases of doubt the editor will be glad to forward notes to the right person. All other material should be sent to the editor, Andrew T. Macmillan, 12 Abinger Gardens, Edinburgh 12. Attention to the following points greatly simplifies the work of producing the journal and is much appreciated.

2. If not sent earlier, all general notes for January to October each year should be sent to the local recorders early in November, and any for November and December should be sent at the beginning of January. In addition, local recorders will be glad to have brief reports on matters of special current interest at the end of March, June, September and December for the journal. All other material should of course be sent as soon as it is ready.

3. All contributions should be on one side of the paper only. Papers, especially, should be typed if possible, with double spacing. Proofs will normally be sent to authors of papers, but not of shorter items. Such proofs should be returned without delay. If alterations are made at this stage it may be necessary to ask the author to bear the cost.

4. Authors of full-length papers who want copies for their own use MUST ASK FOR THESE when returning the proofs. If requested we will supply 25 free copies of the issue in which the paper is published. Reprints can be obtained but a charge will be made for these.

5. Particular care should be taken to avoid mistakes in lists of references and to lay them out in the following way, italics being indicated where appropriate by underlining.

Dick, G. & Potter, J. 1960. Goshawk in East Stirling. *Scot. Birds* 1:329.
Eggeling, W. J. 1960. *The Isle of May.* Edinburgh and London.

6. English names should follow *The Handbook of British Birds* with the alterations detailed in *British Birds* in January 1953 (46:2-3) and January 1956 (49:5). Initial capitals are used for names of species (*e.g.* Blue Tit Long-tailed Tit) but not for group names (*e.g.* diving ducks, tits). Scientific names should be used sparingly (see editorial *Scottish Birds* 2:1-3) and follow the 1952 B.O.U. *Check-List of the Birds of Great Britain and Ireland* with the changes recommended in 1956 by the Taxonomic Sub-Committee (*Ibis* 98:158-68), and the 1957 decisions of the International Commission on Zoological Nomenclature (*Ibis* 99:369). When used with the English names they should follow them, underlined to indicate italics, and with no surrounding brackets.

7. Dates should normally be in the form "1st January 1962", with no commas round the year. Old fashioned conventions should be avoided—*e.g.* use Arabic numerals rather than Roman, and avoid unnecessary full stops after abbreviations such as "Dr" and "St".

8. Tables must be designed to fit into the page, preferably not sideways, and be self-explanatory.

9. Headings and sub-headings should not be underlined as this may lead the printer to use the wrong type.

10. Illustrations of any kind are welcomed. Drawings and figures should be up to twice the size they will finally appear, and on separate sheets from the text. They should be in Indian ink on good quality paper, with neat lettering by a skilled draughtsman. Photographs should either have a Scottish interest or illustrate contributions. They should be sharp and clear, with good contrast, and preferably large glossy prints.

THE SCOTTISH ORNITHOLOGISTS' CLUB

THE Scottish Ornithologists' Club was founded in 1936 and membership is open to all interested in Scottish ornithology. Meetings are held during the winter months in Aberdeen, Ayr, Dumfries, Dundee, Edinburgh, Glasgow, St Andrews and elsewhere at which lectures by prominent ornithologists are given and films exhibited. Excursions are organised in the summer to places of ornithological interest.

The aims and objects of the Club are to (a) encourage and direct the study of Scottish Ornithology in all its branches; (b) co-ordinate the efforts of Scottish Ornithologists and encourage co-operation between field and indoor worker; (c) encourage ornithological research in Scotland in co-operation with other organisations; (d) hold meetings at centres to be arranged at which Lectures are given, films exhibited, and discussions held; and (e) publish or arrange for the publication of statistics and information with regard to Scottish ornithology.

There are no entry fees for Membership. The Annual subscription is 25/-; or 7/6 in the case of Members under twenty-one years of age or in the case of University undergraduates who satisfy the Council of their status as such at the time at which their subscriptions fall due in any year. Joint membership is available to married couples at an annual subscription of 40/-. "Scottish Birds" is issued free to members but Joint members will receive only one copy between them.

The affairs of the Club are controlled by a Council composed of the Hon. Presidents, the President, the Vice-President, the Hon. Treasurer, the Editor and Business Editor of "Scottish Birds", the Hon. Treasurer of the House Fabric Fund, one Representative of each Branch Committee appointed annually by the Branch, and ten other Members of the Club elected at an Annual General Meeting. Two of the last named retire annually by rotation and shall not be eligible for re-election for one year.

A Scottish Bird Records' Committee, appointed by the Council, produce an annual Report on "Ornithological Changes in Scotland."

An official tie in dark green, navy or maroon terylene, embroidered with small crested tits in white, can be obtained by Members only from the Club Secretary, at a cost of 17s 6d. A brooch in silver and blue is also available to Members, price 3s 6d, from the Club Secretary or from Hon. Branch Secretaries.

The Club-room and Library at 21 Regent Terrace, Edinburgh 7, will be available to Members during office hours, and on Wednesday evenings from 7 to 10 p.m. during the winter months. Members may use the Reference Library, and there is a small duplicate section, consisting of standard reference books and important journals, which can be lent to students and others wishing to read a particular subject. A lending section for junior Members, which is shared with the Young Ornithologists' Club, is also available.

Forms of application for Membership, copy of the Club Constitution, and other literature is obtainable from the Club Secretary, Mrs George Waterston, Scottish Centre for Ornithology and Bird Protection, 21 Regent Terrace, Edinburgh 7. (Tel. Waverley 6042).

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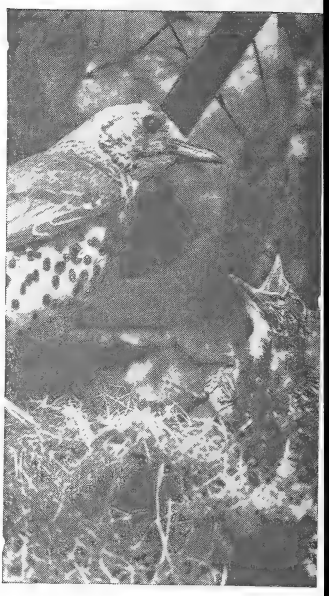

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1966 - 1967

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The index is in three parts. The first is a general index to the various sections of the journal; the second is a list of all papers and short articles; and the third is an index of all significant mentions of each species. Only the first page of each reference is given, except in the index of papers and short articles.

English names are used throughout. A complete list of scientific names is not given in this volume, but those not included at the end of volume 2 or volume 3 are noted. We continue to follow the amended 1952 B.O.U. list, as detailed in volume 2, page 515, as the new British List is not yet published.

The species index is selective rather than comprehensive. Titles of short papers and short notes dealing with particular species are included in abbreviated form, and various sub-headings are added; otherwise only page numbers are given. All references in short and current notes, reviews of changes in status, local status lists, and lists of unusual occurrences, have been indexed. As most contributions are concerned with migration and distribution of birds in Scotland it may generally be assumed that where no further details of the references listed for a species are given they are mostly of this nature. Passing and comparative references have usually been omitted, and also references within the body of papers, reviews, obituaries and other contributions, unless they are status reports or considered of special interest apart from the context in which they appear. In particular it has to be emphasised that detailed and valuable information on migration and numbers of common birds, in papers such as the Isle of May reports, finds no place in the index to species.

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Scientific Names

This is a list of species mentioned in the index to volume 4 but not previously detailed in *Scottish Birds* 3: 454 or 2: 515-517, where a complete list is given together with details of the authorities followed for scientific and vernacular names.

Diomedea melanophrys Black-browed Albatross
Ardea purpurea Purple Heron
Ixobrychus minutus Little Bittern
Anas discors Blue-winged Teal
Aix galericulata Mandarin Duck
Histrionicus histrionicus Harlequin Duck
Branta ruficollis Red-breasted Goose
Milvus migrans Black Kite
Otis tarda Great Bustard
Charadrius dubius Little Ringed Plover
Tringa stagnatilis Marsh Sandpiper
Calidris minutilla Least Sandpiper
Calidris temminckii Temminck's Stint
Calidris fuscicollis White-rumped Sandpiper
Glareola pratincola Pratincole
Gelochelidon nilotica Gull-billed Tern
Alca impennis Great Auk
Coccyzus americanus Yellow-billed Cuckoo
Coccyzus erythrophthalmus Black-billed Cuckoo
Merops apiaster Bee-eater
Coracias garrulus Roller
Calandrella cinerea Short-toed Lark
Catharus minimus Grey-cheeked Thrush
Monticola solitarius Blue Rock Thrush
Acrocephalus paludicola Aquatic Warbler
Sylvia cantillans Subalpine Warbler
Phylloscopus trochiloides Greenish Warbler
Phylloscopus proregulus Pallas's Warbler
Regulus ignicapillus Firecrest
Anthus novaeseelandiae Richard's Pipit
Anthus hodgsoni Olive-backed Pipit
Anthus spinoletta spinoletta Water Pipit
Lanius senator Woodchat Shrike
Loxia leucoptera Two-barred Crossbill
Emberiza melanocephala Black-headed Bunting
Emberiza pusilla Little Bunting

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THE BIRDS OF FOULA

By E. E. JACKSON

Vol. 4 Special Supplement *Spring 1966*

FIVE SHILLINGS

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Scottish Birds

THE JOURNAL OF THE SCOTTISH ORNITHOLOGISTS' CLUB

Vol. 4 Special Supplement **Spring 1966**

Edited by A. T. Macmillan with the assistance of D. G. Andrew, T. C. Smout and P. J. B. Slater. Business Editor, T. C. Smout.

THE BIRDS OF FOULA

E. E. JACKSON

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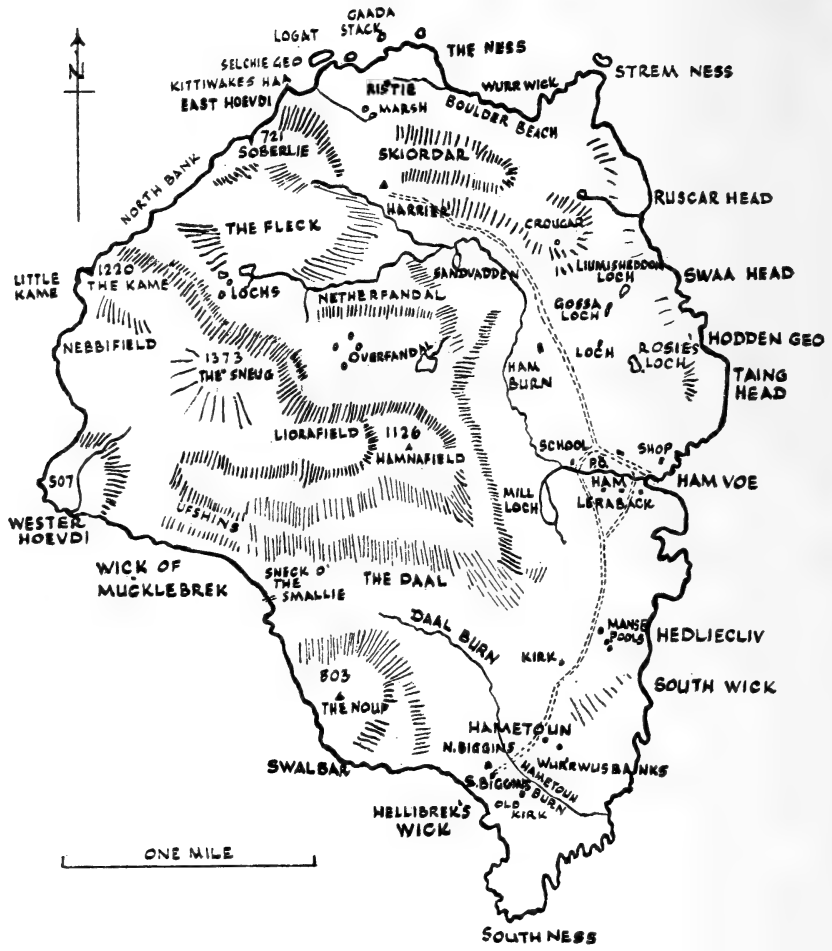
Introduction

Low (1879) wrote regarding the birds seen on Foula in 1774, "It is the number not the variety that amazes one, and indeed all the flights I had before seen were nothing to this: as far as the eye can stretch, the whole precipice swarms, the sea around is covered, and the air in perpetual motion, flocking either to or from the rock. This puts one in mind of a capital city to which the whole kingdom resorts once a year. Here they are in perpetual motion, passing and repassing, going and returning; everything is noise and uproar, bustle and hurry reigns, every creature attentive to the great law of nature, hasting to perform its function before the return of winter when it knows it must take its departure."



MAP 1. MAP OF FOULA

General Description

Foula is a small island situated in the North Atlantic 26 miles west of Scalloway and 14 miles from the nearest point of the Shetland Mainland. It lies just north of the sixtieth parallel, which passes through Cape Farewell in Greenland, and Oslo in Norway. Foula is over 100 miles from the north coast of Scotland and 45 miles NNW from Fair Isle. The island is 3½ miles from north to south, 2½ miles from east to west, and almost 4000 acres in area (map 1).

To the east the ground is comparatively flat (plates 4, 7) but it rises steeply to the west, where the four hills—Soberlie (721 ft), the Kame (1220 ft), the Sneug (1373 ft) and Hamnafield (1126 ft)—dominate the rest of the island. The Noup (803 ft) in the southwest is separated from the other hills by the broad glaciated valley of the Daal which runs approximately east to west across the south end of the island. The cliffs between Wester Hoevdi and East Hoevdi, a distance of over two miles, are never less than 500 ft and often over 1000 ft. They reach their peak at the Kame of Foula where there is a 1220 ft sheer drop into the sea. These cliffs clearly show the stratification of the old red sandstone with horizontal ledges, which in places, especially near the sea, are sufficiently weathered to provide breeding ledges for numbers of Kittiwakes* and auks, especially Guillemots. The main cliff faces however are characterised by vast expanses of flat vertical rock. Wester Hoevdi (plate 5) and Nebbifield especially are sheer walls and, like the unbroken faces of the North Bank, provide very few ledges even for Fulmars to get a foothold. The higher parts of the North Bank and the Kame are broken up with grassy ledges and in some places, such as the Little Kame, with long grass slopes. These are colonised by large numbers of Fulmars and countless Puffins. In places the cliffs do not drop sheer into deep water, but erosion and cliff falls have resulted in the accumulation, at their base, of considerable quantities of detritus, which forms an ideal habitat for such species as Shag and Black Guillemot. The talus on the south side of the Noup provides secure nest sites for Manx Shearwaters. Storm Petrels are also numerous here, amongst a jumble of boulders and steep grassy slopes.

Most of the island is composed of old red sandstone. In the extreme northeast, however, the rock is composed of highly metamorphosed pre-Cambrian strata which now appear as greenish grey micaceous schists through which are intruded veins of pinkish granite. Boulder clay is also present in places, and particularly near the Ness. The sandstone gener-

*Scientific names are given in the classified list of species.

ally dips southeastwards at an angle of about 35°. This dip causes landslips at the south end where the strata dip seawards. On the north coast there is a fine series of razor-edged stacks where the strata dip landwards. Some of these stacks are penetrated by caves and natural arches as a result of unequal erosion in strata of varying hardness. The stacks, with the exception of the Gaada Stack, are not important breeding areas, but are used as roosting places, particularly by gulls. The shore line drops below 50 ft only at South Ness, and from Ham Voe to Taing Head, and for short stretches north and south of Strem Ness. Waders are largely confined to these seaward-sloping ledges along the east coast, and to lochans and marshy areas inland. Geos, deep narrow inlets due to erosion along vertical joint and fault lines, are features of the coastline which provide rather more shelter than elsewhere and usually hold more concentrated numbers of breeding birds.

The inland surface of the island (plate 6) has been well smoothed, probably by ice, and is covered either with very thin stony soil with poor grass, or with peat. The peat is a major feature of the island and is still being actively formed. In most areas it has accumulated to a depth of many feet. Drainage is generally poor and the resulting areas of damp and marshy ground are particularly favoured by the breeding skuas. Lochs or lochans are situated in numerous places and, whilst some are only tiny pools, the Mill Loch (plate 2) is about 300 yards long.

Extensive grazing on the island by sheep, cattle and rabbits has modified the natural vegetation. Information regarding the flora of Foula may be found in Turrill (1929) and Messenger and Urquhart (1959).

The ground has been influenced by man's activities for generations. In some places, such soil as there was has been removed to improve cultivated plots, and in others the land has been drained by ditching. The ditches however have not been maintained and in many places they are now choked with reeds. The small areas of arable land are still largely cultivated by hand, and whilst some machinery is now used its value is hardly worth the capital expenditure to the crofter. Oats and barley were once major items in the islanders' diet, being ground either by hand querns or in the clack mills situated along the Ham and Daal Burns. Some oats are still grown for cattle and hens, but none are ground now, and flour is bought from the mainland. The main crops today are vegetables, particularly potatoes.

There are numerous stone enclosures known as 'plantie-

crubs' (plate 4) in which young plants (*e.g.* kale) could be grown, with protection from the wind, until their rooting systems were sufficiently well developed to allow transplanting into the rigs. Most are now unused for their intended purpose, but many shelter flowers not growing so profusely in more exposed situations. Since there are not many gardens (plate 1), and few trees (none being higher than the stone walls that shelter them), it is the arable areas which provide most cover for migrant passerines. The plantiecrubs, reedbeds, and sheltered areas such as Ham Voe and the Sneck of the Smallie are also favoured

Human settlement has been confined to the land suitable for crofting on the east side, with concentrations at Hametoun in the south, at Ham in the centre, and at more isolated places in the north, many of which are now abandoned. The shop, school, post office (plate 1), and only suitable landing place (plate 8) are at Ham. The kirk and the manse are to the south of Ham.

Each township is enclosed by a stone wall within which are the cultivated plots and the hay. Within the infield animals are tethered. The crofts (many are now in ruins) are normally situated around the perimeter of the enclosed areas, inside the surrounding wall. Beyond are the peat workings and free grazing land.

In 1790 the population was 143 and this had risen to 267 by 1881. Since then there has been a steady decline, with 175 in 1911, 118 in 1931, 73 in 1953, and 35 at the present time. The occupant of Breckans, the last inhabited Black House in Shetland, died in hospital in Lerwick in December 1964 after being taken from Foula only a short time before. The friendliness and hospitality of the islanders is a byword among people who have visited Foula. They are deeply attached to their island home and it would be a sad day were the possibility of evacuation ever to become a reality.

Ornithologists on Foula

Ornithological visitors to Foula have been infrequent owing to the island's remoteness, the danger of the crossing in bad weather and the unreliability of sailings to and from the mainland. Prolonged periods of work have also been prevented by the general lack of facilities and accommodation available to visitors. Records are few, and scattered in various publications and private notes. The object of this paper is to collect together all available information, which I hope will serve as a useful basis for future workers on the island.

A few of the eighteenth and nineteenth century naturalists

made their way to Foula, but, although their accounts make interesting reading, detailed information on the status of the birds is usually lacking. Evans and Buckley (1899) do however quote a number of the older records. In the present century the first regular observations were made by W. H. Greenaway, schoolmaster on Foula for a number of years from 1917. Unfortunately his observations were never fully written up, though some of his notes survive. After Greenaway there were only very occasional visits by ornithologists until Pennie (1948) published a brief paper following 16 days stay on the island. Venables and Venables (1955) brought up to date the previous work by Evans and Buckley and included a number of fresh references to Foula.

C. K. Mylne has contributed an Appendix on 'The significance of Foula as a migration station' and also a great number of valuable records as a result of his eighteen-month stay on Foula from April 1954 as schoolmaster-missionary. Were it not for his observations, recent records for the period from mid September to May would be almost non-existent.

Since 1956 the Brathay Exploration Group has been visiting Foula and using an old croft as a base camp for three fortnightly expeditions each year. The first expedition normally arrives in the last week of July. These expeditions have an organised programme of field studies which embraces many aspects of biology and geography. Ornithology is a major study and experienced people are appointed to each expedition to supervise this aspect of the work. The author first visited Foula with the Exploration Group in 1959, and has returned each year since, both with the group and independently, for periods of up to six weeks. Since 1960, parties of ornithologists connected with Brathay have been able to visit the island throughout July, but though some cover has been maintained in May and June a fully continuous cover throughout the breeding season has not yet been achieved.

No mention of ornithologists on Foula could be complete without reference to the islanders themselves. They are very keen and knowledgeable about their birds and have been responsible, in the first instance, for a good many of the records that follow.

Some breeding birds

Separate articles below deal with four of the more important breeding species—Fulmar, Great Skua, Arctic Skua and Kittiwake. All other species are discussed in the classified list which follows.

Fulmar

During the residence of Saxby in Shetland (1859-71) this species was commonly seen out to sea, but at that time the only British breeding station was St Kilda. On 4th June 1878 about twelve pairs were found nesting on the Kame, making Foula the second known breeding area. In 1879 the number had increased to about 20 pairs (Garriock 1879). A stranded dead whale which the first-comers discovered, is said to have been the immediate attraction to the island. The same story is told of birds in other places. In 1887 at least 16 pairs were breeding and in 1890 there were between 60 and 100 pairs in two groups about a mile apart. In 1898 there were 'multitudes' on the Kame, and on other cliffs, the increase having been very remarkable. Large numbers of birds were present in 1919 (Fisher 1952). Many authorities consider that the spread is more likely to have come from Iceland and the Faeroes than from St Kilda.

Attempts to reach accurate figures for the breeding population in several recent years have resulted in our realising how cautious one must be in accepting single counts as reliable. Fisher and Venables estimated a little over 10,000 occupied sites in July 1938, and Stewart reached the same conclusion in 1939. In each year from 1959 to 1961 a census was made by dividing the island coastline into sections. The method used was direct counting from the land of all apparently occupied Fulmar sites. Four early July counts all agreed to within 500 sites, and suggested a total population of a little over 8,000 pairs. Three late August counts agreed to within 300 sites and suggested a figure of 4,000 pairs. At the time of the August counts the young birds had not started to leave the nest. During the early part of the breeding season large numbers of non-breeding birds occupy sites on the cliffs, but they move away as the season progresses. In the vast majority of cases it is quite impossible to tell whether a bird occupying a site is in fact a breeding bird. In July 1961 it was discovered that a considerable number of Fulmars left the cliffs just after dusk and returned again at dawn. The sites were left abandoned for several hours and therefore most probably belonged to non-breeding birds. There was no way of making a reliable overall estimate of the proportion of these birds, but in Ham Voe (which cannot be regarded as

typifying other areas) 26 pairs occupied sites during the daytime; only six pairs were actually breeding and, at the time when these six sites were always attended throughout the night by one or both of the adults, the remaining 20 sites were usually, but not always, deserted at night.

Apart from the early departure of non-breeding birds, such factors as mortality and desertion will also contribute towards the drop in numbers during the breeding season. Birds which have left their sites for these reasons will clearly not be included in the late-season estimates of 4,000 pairs.

There has been little evidence of predation on the Fulmar. Some islanders occasionally take the eggs for food but the number taken is insignificant. On 8th August 1961 a Great Skua was seen to take a partly grown youngster from its nest near Hedliecliv and hold the bird underwater until it had drowned. In 1963 two similar occurrences were noted beneath the North Bank during late August.

Away from the cliffs, nests can be found in ruined crofts, plantiecrubs and amongst boulders both on the hillside and at beach level. Forty of these inland sites were recorded in 1961. Dead Fulmars are often found in the plantiecrubs which are too small in diameter to allow the birds sufficient lift to escape once they have alighted inside. This used to be a serious nuisance as the birds broke the cabbage plants in their efforts to get out. The plantiecrubs were covered with a net to keep the Fulmars out, but since very few cabbages are now grown in this way a net is no longer necessary.

The majority of young hatch during the second and third weeks of July, leaving the cliffs in early September.

By the end of September there are few birds left on the cliffs, but many can be seen offshore. The ledges are reoccupied in late October and November. In spring there is a period when the birds which have been on the ledges all winter depart in large numbers for about three days, just before laying. This decrease in numbers was recorded on 11th-13th May 1954, and 12th-14th May 1955, with marked increases on 14th May 1954, and 17th-19th May 1955. From this time the birds settled in to breed without further interruption.

Dark-phase birds have been recorded on only four occasions, twice in March 1955 and in August 1957 and 1958.

Ringed	Recovered	
pull. 4.8.56	10.6.63	Foula (found dead)
pull. 21.8.56	14.3.58	off Newfoundland, 49°N, 50°W; 210 mls WSW.
pull. 4.8.58	31.5.63	Hirtshals, Jutland, Denmark.
pull. 29.8.60	18.9.62	North Sea, 54°36'N, 0°12' E.
ad. 12.7.60	20.6.65	Seahouses, Northumberland; 315 mls S.

Great Skua

The first mention of the Great Skua on Foula is for 1774, when six pairs were present on Liorafield, with possibly some on the Sneug (Low 1879). At this time the Bonxie was greatly favoured by the islanders. Low wrote "In Foula there is a privileged bird, no man will dare shoot it, under the penalty of 16s. 8d. sterling, nor destroy its eggs: when they meet it at sea, whatever fish they have in the boat Skua always gets a share, and all this out of gratitude for beating off the Eagle, who dares not venture to prey on the island during the whole of the breeding season. Skua is not so strong as the Eagle, but much more nimble: strikes at him without mercy, with such effect that he makes the other scream aloud, and his retreat is so sudden as to avoid all danger from the Eagle."

At the turn of the century there were about a dozen pairs, and in 1804 Foula was described as the principal breeding place in Shetland with about 30 pairs (B&R)*. Vetch (1822) said that Bonxies were in exclusive possession of the Sneug above 1300 ft and nowhere else, with probably no more than 30 pairs.

In 1806 Laing (1815), 1809 (Edmonston 1809) and at the beginning of the 1880s (Barrington 1890 a, b) the only breeding places for Bonxies in the British Isles were said to be on Unst and Foula. A colony to the north of Ronas Hill, Mainland, is however mentioned by Dunn (1837) who shot several birds there.

Bonxies were greatly persecuted during the nineteenth century and had become so rare in 1831 when Dr L. Edmondston began to protect the Unst colony that its total extinction seemed inevitable. In 1872 "numbers" were shot on Foula by Bullock (E&B), and in 1874 the colony was "cruelly thinned down" (Saxby 1874).

At about this time the islanders were reported to be taking most of the eggs, and excursion steamers visited the island for the express purpose of shooting skuas. Fortunately John Scott of Melby, then laird of Foula, introduced some measure of protection and even employed a man to follow strangers into the hills. As a result of this protection Saunders (1880) and Russell (1887) said that the skuas were now tolerably safe although a few eggs were still being taken and sold surreptitiously. John Scott was later awarded the silver medal of the Council of the Zoological Society of London for his efforts towards skua protection (Clarke 1892).

There were either 16 or 60 pairs in 1884 (E&B), 60 pairs in

*A key to abbreviated references is given with the classified list of species.

1887 (E&B), 84 in 1889 (Barrington 1890), and 50-100 in 1890. All first and second layings were taken that year and only 35-40 young of third layings were reared (Barrington 1890a; Traill 1890). John Scott's protection was now no longer in effect and persecution had resumed. From 100 pairs in 1891 all first layings were taken except for six eggs, but 60 young were reared from 40 second layings (E&B). 1892 was a very successful year with 120 pairs breeding, but in 1893 the eggs were taken and probably no young reared at all (E&B).

In spite of a gradual increase in numbers, great concern was shown about the future of Bonxies on Foula. Harvie-Brown and Traill both condemned the shooting and egg collecting in letters to the *Zoologist*. Lord Lilford in a letter to R. Scott Skirving (2nd President Edinburgh Naturalists Field Club) dated 25th February 1892, was concerned about the preservation of the Great Skua from extinction. He complained that the absurd sums offered for skins and eggs were too great a temptation to a poor population, and feared that little could be done unless the owner had legal power to prohibit the use of firearms and also to punish for egg stealing. His concern was so great that he was apparently even prepared to consider purchasing the island (which was up for sale at the time) to protect the colony either himself or in cooperation with other subscribers (this letter is now in the possession of the Scottish Ornithologists' Club at Regent Terrace, Edinburgh).

No further information has been traced until "about 1920" when the Noup was first colonised by one pair; there were 30-35 pairs here in 1948 (V&V). In 1938 the total population was estimated at about 300 pairs (V&V). Islanders reckon that the low-lying ground to the north of Ham was first colonised about 1940. 400-500 pairs in 1948 included many non-breeders. Eggs were still being taken for food (V&V). From 1956 to 1959 various estimates by the Brathay Group gave between 500 and 700 pairs. In 1963 careful counts of nests suggested a breeding population of about 900 pairs, but this figure was thought to be reduced in 1964 (map 2). The numbers of the non-breeding population have not been estimated.

The Bonxie is now widespread and numerous as a breeding species in Shetland and has extended its range to Orkney, the Outer Hebrides (including St Kilda), Handa, and the mainland of Scotland. In some quarters it has been suggested that the Bonxie should no longer be afforded the protection it receives under the 1954 Protection of Birds Act. In Shetland it is accused of driving out other birds, and of

Map 2. The main skua territories on Foula in 1963. The breeding area of the Arctic Skuas is shown by horizontal shading, and that of the Great Skuas by vertical shading. Note the small area of overlap in the north of the island.

causing a serious decline in the numbers of Kittiwakes, Puffins and Arctic Skuas. While it is unquestionably guilty of attacks on these species, it is by no means certain that it has in fact caused any decline in numbers. It may be that Great Skua numbers have increased parallel with, or subsequent to, an increase in the numbers of the prey species. Vetch (1822) recorded that Kittiwakes nested only in Kittiwakes Haa. They now use suitable places all round the island. This apparent increase in Kittiwakes may have led to a subsequent increase in skuas which could rob them and in some cases prey on them.

The increase of the Bonxie in the British Isles has resulted in statements relating to its abundance which should also be subject to more critical examination. Andrew (1964 a, b) suggests that the Atlantic population has increased by a factor of ten in the present century. This has been challenged by Dickens (1964) who suggests that the increase in the southeastern part of its range may well be balanced by the drastic decrease in Iceland. The entire Atlantic population breeds in Iceland, Faeroe and northern Britain. The great increase in Shetland and Faeroe, first noted in the 1930s, seems to coincide with the decrease in Icelandic numbers.

A probable shift of the centre of population from Iceland to Shetland (for reasons not immediately apparent) has given some people the idea that a population explosion has occurred. The evidence suggests that this is not true, and that the Bonxie remains one of the rarest sea birds in the North Atlantic.

Bonxies arrive on Foula from the beginning of April onwards, 27th March 1891 being the earliest recorded date.

There is a marked preference for nesting about the hilltops and on peat moors, often in damp situations. Most of the island surface exhibiting these features has now been colonised.

Coition has been observed from as early as 1st May to as late as 6th August. Egg laying is at its peak during the latter half of May, and, following (on average) 30 days for incubation and 45 days for fledging, the young fly during early August. Adults often dive at newly flying young and force them to the ground. This possibly has some survival value in that it prevents the young from straying into territories of other skuas where fatal injuries are sometimes received.

Birds begin to leave the island from mid August, though some remain throughout September. The latest record is of one on 9th October 1954.

At one time the islanders collected Bonxie eggs for food.

Though the practice has been less common in recent years Mylne gives an interesting account for 1954. The first collecting was done on 16th and 17th May, and according to tradition a second excursion to the hills was made a fortnight later to collect the eggs freshly laid in the same nests. The colony from which the collecting was made later produced large numbers of young. On 26th July many young were still in down and some not more than two weeks old. These were probably the chicks of parents whose eggs had been collected twice and had not laid again until mid June. The half-fledged chicks at this date were probably from nests which had been robbed once in mid May, and where incubation of the second clutch had not started till early June, with a hatching date in early July. The first flying young were also seen on 26th July and these probably represented eggs which had escaped the collectors and were laid in mid May.

It is unlikely that the collection of Bonxie eggs would have much effect on the breeding success of the skuas themselves, since replacement layings may take place even after the second or third clutches have been taken. It is interesting however to speculate on the possible effects on the prey species. The collecting of the eggs may mean four or five weeks postponement in the breeding season. This means that the maximum requirements for food to satisfy growing young coincide with the period when young Kittiwakes are leaving their ledges and young Puffins their burrows. In an uninterrupted season the skuas would presumably select a food supply more readily available at an earlier date. Observations have shown that young skuas are fed at first almost entirely on fish, but later (particularly when the skuas have a late breeding season) birds, especially young Kittiwakes and Puffins, become an important part of their diet. The corpses found on Bonxie territory vary from one year to another. From 1956 to 1959 adult Puffins were particularly numerous; in 1960 young Kittiwakes predominated; but from 1961 to 1964 relatively few bird corpses were found, and in these years fish remains were much more in evidence than previously.

Comparatively few of the characteristic piratical attacks made to obtain fish have been seen immediately offshore. There is a marked passage of skuas to and from Shetland and presumably much food is collected on these journeys, possibly from the Shetland Gannets. If any boats are gutting fish offshore large numbers of Bonxies quickly collect and are so greedy that they will almost take offal from the hand.

Bonxies undoubtedly kill large numbers of the island's birds, but it is still questionable whether they cause any

serious depletion in populations. There are three main methods of attack. The commonest is where a Bonxie selects an individual bird and pursues it with incredible agility. Unlike the occasions when it is pursuing for fish the skua repeatedly drives straight into its victim, striking it with feet, breast or wings until it has been forced to ground (or water), where it quickly kills its prey with a few well directed blows of its powerful bill. Quite often a bird coming down on land is not further attacked, but those brought down on the sea almost invariably are. The fury of these aerial attacks is sometimes so great that the skua itself may be injured (broken wings sometimes result), and other skuas quickly move in and take advantage of the damaged bird. It is on such occasions that cannibalism amongst adults takes place. In the second method the skua waits at the entrance to a burrow for a bird to emerge. A well directed blow with the bill at the base of the skull of the prey is sufficient. Thirdly, a skua sometimes swoops along the cliffs passing close to Puffins gathered on the slopes. The Puffins take to flight and wheel round in dense flocks before relanding. The skua climbs to a height above a chosen flock, and with half-closed wings dives like a hawk into the concentration of flying Puffins. Sometimes after the first dive, but usually after a few attempts, a Puffin is struck and, if not caught in flight, falls to the sea below, where, if not already dead, it is killed by the skua. Bonxies occasionally work in groups to obtain their food (see under Arctic Skua). They will attack almost any species, and successful killings noted on Foula have included Storm Petrel, Fulmar, Eider, Oystercatcher, Lapwing (young), Arctic and Great Skuas (adults and young), Herring Gull, Arctic Tern, Black Guillemot, rabbit and hedgehog. Red-throated Diver and Heron (see under Heron) have also been subjected to fierce attacks, but ultimate killings have not resulted.

In May and June 1958 Dr A. C. Perdeck visited Foula with other Dutch ornithologists. Results of his studies relating to skua behaviour were published in *Ardea* (Perdeck 1960, 1963).

Non-breeding or off-duty birds spend a great deal of their time either in the Bonxie 'clubs'—traditional sites where they rest and display—or in bathing parties. The Bonxie is particularly fond of bathing in fresh water, and at almost any time of the day parties may be seen splashing, diving and rolling in the water. Most lochs are used for bathing, but Overfandal Loch, the Fleck Lochs, and particularly the Mill Loch, are the favourites (plate 3). Bathing parties are at their largest at about midday, especially on warm sunny days. The largest party on record is of 175 birds at Mill Loch.

Recoveries of Great Skuas ringed as chicks on Foula

	Recovered in						
	First Winter	Second Winter	Second Summer	Third Winter	Third Summer	Fourth Summer	Total
Greenland			6				6
Faeroes					1	1	2
British Isles	6		1	1	1	1	10
Denmark	7(4)						7
Germany	6(5)						6
Holland	8(5)						8
Belgium	1						1
U.S.S.R.	1						1
Poland	1(1)						1
Austria	2(2)						2
France	13(6)	1		1			15
Spain	4	2		2			8
Portugal	4	2					6
Tunisia			1				1
	53(23)	5	8	4	2	2	74

Figures in brackets indicate birds involved in the 1963 'wreck'; 17 of these were recovered between 2nd and 25th October 1963, some of them far inland.

3464 Great Skuas—all pulli—have been ringed on Foula since 1954.

Selected Great Skua recoveries

Ringed	Recovered		
31. 7.59	28.12.59	at sea off W coast of Ireland,	52°45'N, 12°00'W.
29. 7.60	20. 6.63	at sea NW of Faeroe Islands,	62°30'N, 8°00'W.
1. 8.61	16. 6.63	Jakobshavn, Greenland,	69°10'N, 51°00'W.
1. 8.61	10. 5.63	Gabes, Tunisia,	33°52'N, 10°06'E.
14. 7.62	1. 9.62	Cherven, Minsk, U.S.S.R.,	52°41'N, 28°30'E.
2. 8.63	3. 9.64	off Sezimbro, Portugal (2 birds),	38°26'N, 9°06'W.
	(the two birds were caught together in fishing tackle)		
26. 7.63	9.11.63	Aix les Bains, France,	45°41'N, 5°55'E.
27. 7.63	2.10.63	near Glogow, Poland,	51°40'N, 16°06'E.
6. 8.63	10.10.63	Jochenstein, Germany (released),	48°31'N, 13°43'E.
and again	10.10.63	Niederkappel, Austria,	48°28'N, 13°53'E.
26. 8.63	18.10.63	Hard, Lake Constance, Austria,	47°29'N, 9°42'E.

Arctic Skua

Barrington (1890a, b) estimated the colony at about 60 pairs. Pennie (1948) reckoned the adult population at about 250 individuals but said they were diminishing in numbers owing to the ravages of the Bonxies, "practically none of the young being allowed to reach maturity." Estimates of breeding birds made in mid June by Dickens and Rushforth, and in early July 1960 by Bell and Jackson, gave a total of about 130 pairs. Similar figures were obtained in 1961 and there was no apparent change in 1962 or 1963 (map 2). An incomplete survey made by Mylne in 1955 gave comparable figures for the area covered.

Bonxies kill a few of the unfledged Arctic Skuas, normally by two or more birds diverting the attention of the parents while another one moves in to make the kill. Many young birds are killed when making their early flights. Once they fly from their own territory and the immediate protection of their parents they may fall easy prey to the Bonxie. In 1960 mortality in newly fledged birds was high, with probably as many as 20% falling victims to Bonxie attacks. Venables frequently found tarsi of Arctic Skua chicks in Bonxie castings during June 1948. The proportion killed clearly varies from one year to another. In 1961, after 117 young Arctic Skuas had been ringed, a search was made to see if remains of any of the ringed birds could be found. Only three of the ringed young were found killed. It would appear that the species is still as numerous as in 1948. Over the period 1959-64, however, the Bonxies have encroached on the Arctic Skua territory to the north of Ham, and the total area occupied by the Arctic Skuas is slowly being reduced. A continuation of this process might well lead to a reduction in numbers of Arctic Skuas. Probably the largest single factor contributing towards this encroachment is that the Bonxies, now in larger numbers, arrive on the breeding ground and take up territory well before the Arctic Skuas. Newly matured or other Bonxies seeking a new nesting site move into the fringe area of the main colony. When the Arctic Skua arrives back at its old nesting place it may find that a Bonxie is already present and well established, and will not be moved. It remains to be seen whether a balance of populations will be reached, or whether the present trend will continue and the Arctic Skua be ultimately driven out.

The main date of arrival on Foula for the summer is variable and probably dependent on weather conditions. Greenaway recorded first arrivals on 27th, 26th, 30th, and 28th April in the years 1917-20 respectively. Mylne gives the following details:

1954—1 on 23rd April, then 4 on 29th, 13 on 3rd May, 20 on 4th, with main arrival on 5th-8th May.
1955—1 on 23rd April, 2 on 24th, over 30 on 26th, and main arrival from 27th April to 1st May.

Coition has been observed on 10th May and eggs are laid towards the end of this month. In 1919 Greenaway recorded the first young on 20th June, and for 1954 and 1955 Mylne gives his first dates as 19th and 15th June. Nearly all the young are on the wing by the end of July.

Once the Arctic Skua has taken up its territory it becomes very aggressive towards any intruders. Bonxies flying over the Arctic Skua's territory are harried unmercifully, some-

times by half a dozen birds, and generally come off worse for the encounter. Gulls and crows are seldom seen over skua territory, but when they or birds of prey are about, they are attacked with equal ferocity. In addition the Arctic Skua will attack human beings, cows, sheep, dogs, rabbits and even hedgehogs. There are two records of dogs catching skuas when being attacked by them.

Non-breeding birds congregate round the lochs on the lower part of the island and parties of up to 30 or more can frequently be seen. These birds generally leave at the beginning of August, the breeders moving off, more or less overnight, shortly afterwards. The breeding grounds are almost deserted by early September and the latest record of an Arctic Skua is of one on 23rd September 1955. Unfledged young are occasionally deserted when the adults leave. There is one winter record of a bird seen on 21st November 1892 (E&B).

An extremely tame dark-phase Arctic Skua returned to Leraback every summer for 31 years, eventually being found dead near its nest with a broken wing in 1941. Its partner continued incubation for about a week and then secured a new mate. In June 1938 James Fisher and L. S. V. Venables were amused to see Robina Isbister of Leraback feeding this bird with the remains of the breakfast porridge. In 1948 the old tradition still continued and both birds came for their morning porridge. James Rattar of Broadfoot also had a 'tame' dark bird which had come to his house for food every summer for 12 years (V&V). In the years 1956-65 a tame bird still visited several of the crofts for scraps.

A phase count at dawn on 15th July 1961 of all Arctic Skuas other than birds of the year, but including non-breeders, gave the following results (map 2):

Number of Arctic Skuas of each phase

Area	Light	Intermediate	Dark
Daal	15	13	18
Wurrwusbanks	47	48	77
Bitten	13	12	13
Lioag	14	26	39
Sandvadden	4	17	15
Skiordar	10	12	30
	103	128	192

Of a total of 423 birds 24.3% were light-phase. From a sample of 134 birds in 1955 Mylne counted 34, or 25.3%, light-phase, and in 1960 Bell and Jackson counted 50, or 23.9%, light-phase out of a sample of 209 birds.

Ringed		Recovered		
pull. 7. 7.60	Foula	26. 6.62	Bressay;	40 mls E.
pull. 18. 7.56	Fair Isle	16. 7.61	Foula;	45 mls NNW.

Kittiwake

Vetch (1822) recorded Kittiwakes Haa as being the only breeding place of this species on Foula. There are now colonies at North Bank, Kittiwakes Haa, Selchie Geo, Hodden Geo, South Ness, Noup, Wester Hoevdi and Nebbifield. In 1961 the total breeding population was estimated to be between 5000 and 8000 pairs. Great difficulty was experienced in counting the more remote colonies and it was impossible to produce a more precise result. Venables says that "the number of Kittiwakes breeding on Foula becomes less every year, this being mainly due to the Bonxies which prey on the adults all the summer and take eggs and chicks from the nests." In recent years it has become apparent that the great majority of Kittiwakes killed by Bonxies are immature birds and that the number of adults killed or nests robbed is quite small.

Foula used to be famous for its Kittiwake flight from the breeding cliffs to the Mill Loch at Ham. The islanders tell how the string of singing birds was never broken. The Isbisters of Leraback said that sometimes they could hardly hear themselves speak, but they did not mind; it was so "lightsome" hearing the birds. Powell (1938) says that when he was on Foula in 1936 he saw Kittiwakes bathing in one end of the loch. L. S. V. Venables found very few using Mill Loch in 1938, and ten years later they had been completely ousted by the Bonxies. On 20th May 1955 Mylne saw a large flock heading towards the Mill Loch, but was not able to confirm whether they were were allowed to use their traditional bathing place.

Rosie's Loch is now the regular bathing place for Kittiwakes and parties of up to 1000 birds may be seen here throughout the breeding season. After bathing they frequently remain preening and resting on the rocks at Taing Head. They pay little attention to the skuas nesting all round Rosie's Loch, and the skuas have not been seen to make any attacks on the bathing Kittiwakes.

Greenaway recorded arrival dates of 29th April 1917 and 3rd April 1919. Mylne recorded most Kittiwake activity in early May. Birds from the cliffs flew down to Rosie's Loch and the Manse pools in noisy parties of up to 200 to bathe and gather nesting material. They formed a continuous procession to and from the cliffs and gathered mud and peat 'mould' in large beakfuls. The cliffs begin to be deserted in mid July and by mid August very few birds are to be seen. The latest record in recent years is of a single bird on 23rd October 1954.

Classified List

The list which follows includes all species for which there is a positive record for Foula. Other species have been reported but, since details were lacking or the evidence insufficient, I have considered it necessary to exclude them completely from this paper.

References to published records are given in the text. Much information has never been published and, unless otherwise stated, all records for which no reference is given are from notes by W. H. Greenaway 1917-20, C. K. Mylne 1954-56, and the Brathay Exploration Group 1956-65. Ornithologists working on Foula with the group since 1956 have included J. F. W. Bruhn, J. V. Boys, M. Bell, R. F. Dickens, R. W. W. Dawe, J. C. Gittins, D. B. Iles, E. E. Jackson, A. E. Land, A. R. Mainwood, D. A. Rushforth and W. C. Wakefield. D. R. Wilson has also worked on Foula in some recent years, and his records are included. Records coming within the scope of the *British Birds* Rarities Committee have all been accepted except for 1961 Pectoral Sandpipers and 1961 and 1965 Scarlet Grosbeaks which, as indicated in the text, are still being considered as this supplement goes to press.

The following abbreviations are used in the text:

B&R—Baxter and Rintoul, 1953. *The Birds of Scotland.*

E&B—Evans and Buckley, 1899. *A Vertebrate Fauna of the Shetland Islands.*

V&V—Venables and Venables, 1955. *Birds and Mammals of Shetland.*

Local names, often ambiguous, exist for many of Shetland's birds. Those which have been heard in use by the Foula people are included after the scientific name.

Red-throated Diver *Gavia stellata*. Rain Goose. Summer resident. Breeds. Recorded breeding as early as 1829 (B&R), but none in 1899 (E&B). Several islanders recall breeding starting again in the 1930s, indicating that breeding had ceased for a number of years previously. The name of a favourite breeding loch, Loomieshun or Liumisheddon, indicates a long history of breeding. This name is applied to several other similar lochs throughout Shetland, and means loma-tjorn, or tarn of the diver (Jakobsen 1936). Breeding is now regular at most small lochans, with up to 7 pairs in some years. From 45 eggs laid in the period 1959-63 18 young birds reached the flying stage. Birds leave breeding sites by the end of August or early September.

Great Crested Grebe *Podiceps cristatus*. One on 27th May 1963.

Slavonian Grebe *Podiceps auritus*. One in October 1895 (E&B).

Little Grebe *Podiceps ruficollis*. One on 1st November 1895 (E&B).

Leach's Petrel *Oceanodroma leucorrhoa*. Present in small numbers in summer. Probably breeds. Nests are said to have been found by islanders in the past, but the evidence is not conclusive (Wilson 1958). Thirteen birds caught in 1965 all had brood patches.

It is difficult to assess the significance of a Foula-ringed bird recovered on North Rona in the following breeding season.

Ringed	Recovered	
ad. 6.8.57	6.7.58	North Rona; 150 mls WSW.

Storm Petrel *Hydrobates pelagicus*. Ala Moutie. Summer resident. Breeds. Undoubtedly very numerous on the island. In the nine years 1957-65 a total of 3216 birds have been trapped inland and at points around almost the entire coastline. Greatest numbers occur between South Ness and Wester Hoevdi. Their breeding sites are mostly still unknown which, considering the nature of the terrain, is not surprising. Hewitson (1832) found them breeding in great numbers "in holes in the cliff at a great height above the sea." Evans and Buckley mention a few pairs breeding between Ham and the Ness; and at Hellibreks Wick the species occupied a series of burrows on some green ledges 30 feet from the top of the island—Pennie found a nest here in 1948 though the site now seems to be occupied entirely by Puffins. Islanders have reported nests on the Sneug, the Kame and Hamnafield. In the last few years a

number of nests have been found near the Sneck of the Smallie and at the back of the Noup. The number of birds captured in these areas suggests that sizeable colonies may exist.

Ringed	Recovered	
ad. 18.8.62	22.6.64	Fair Isle; 45 mls SSE.
ad. 15.8.63	5.8.64	Fair Isle; 45 mls SSE.
ad. 12.7.60	30.6.61	Mousa; 36 mls ESE.
ad. 3.8.61	31.8.61	Garderhouse, Mainland; 30 mls ENE.
ad. 28.8.63	2.2.64	False Bay, South Africa, 34°08'S, 18°25'E.

MANX SHEARWATER *Procellaria puffinus*. Leerie. Summer resident. Breeds. Dunn (1837) said that "considerable numbers" bred in the island. Evans found nests in 1887 (E&B), probably on the Noup, but Drosier (1831) suggests nesting high up on the Kame. When the Venables visited Foula in 1938 they found quite an extensive colony on the Noup but this was considerably smaller when they revisited the island in 1948. R. Isbister of South Biggins said that shearwaters were becoming less numerous every year and their burrows were being taken over by Puffins. It seemed to him that Puffins were actually driving out shearwaters for, apart from the nests on the Noup, there used to be an extensive breeding colony on Leerie Heads up to about 1910. This locality is now occupied only by Puffins. He gave 50 pairs as a very rough estimate of the total Foula breeding population in 1948, mostly on the Noup but with a few pairs on the South Ness and about the Sneck of the Smallie. In 1956 Wilson estimated the colony at possibly 30-40 pairs, and in 1963 Bell and Jackson considered numbers to be much the same.

On many evenings in July and August 1961 the shearwaters collected into a flock of up to about 50 birds and could be seen flying around the island before coming in to their burrows on the Noup. This flocking has not been recorded in other years.

SOOTY SHEARWATER *Procellaria grisea*. Occasional visitor in early autumn. Since 1959 up to 3 birds have been recorded off the coast every year except 1960, between 11th August and 13th September.

FULMAR *Fulmarus glacialis*. Maalie. Breeds. Abundant throughout the year. See separate article.

GANNET *Sula bassana*. Solan. Common offshore, especially in late summer. Usually in small numbers but with anything up to about 250 birds present. Adults have been seen pat-

rolling the cliffs in recent years, though there has been no evidence of breeding.

CORMORANT *Phalacrocorax carbo*. Lorin. Occasional visitor. "Evans observed an occasional specimen, but the bird must be rare in that quarter as Mr F. Traill, who lived on Foula, reported it only once." (E&B). The species seems to be no more numerous today as only occasional birds have been recorded in recent years. Most occurrences have been of single birds in August and September, when they come to fish on Mill Loch. A bird at Mill Loch on 9th March 1955 disgorged three trout when disturbed, and left two others killed, but not eaten, at the side of the loch. On most days in July and August 1963 a bird could be seen off Hedliecliv.

SHAG *Phalacrocorax aristotelis*. Scarf. Abundant throughout the year. Breeds in vast numbers around the coast, and nests can be found anything up to 300 ft above sea level. The largest colony is in the Wick of Mucklebrek where approximately 1000 pairs were breeding in 1961 and 1962. In 1955 birds were carrying nesting material by 13th March, the first eggs were reported on 19th April and young on 20th May. In bad weather flocks of over 300 birds can frequently be seen gathered on the headlands.

Rafts of over 1000 birds were gathered off the east coast in August 1963 and 1964, presumably fishing for the mackerel and piltock (young saithe) which were extremely abundant at the time.

Recoveries of Shags ringed as chicks on Foula

	Recovered in					
	First Winter	First Summer	Second Winter	Second Summer	Fourth Summer	Total
Shetland	50	16	10	3	1	80
Orkney	2	1	1			4
Scotland	10	2		1		13
Norway	2					2
Denmark	1					1
	65	19	11	4	1	100

3132 Shags—all but 17 were pulli—have been ringed on Foula since 1954.

Selected Shag recoveries

Ringed	Recovered	
10. 8.57	11.10.57	near Golspie, Sutherland; 160 mls SSW
12. 8.57	13.10.57	Peterhead, Aberdeenshire; 180 mls S.
10. 8.59	5. 3.60	Loch Eynort, S. Uist, Outer Hebrides; 270 mls SW.
12. 8.63	8. 4.64	Monifieth, Angus; 255 mls S.
14. 8.61	15.10.61	Voersa, Jutland, Denmark; c.450 mls SE.
11. 8.61	2.12.61	Batalden Isle, Sogn og Fjordane, Norway; c.250 mls E.

HERON *Ardea cinerea*. Haigrie. A regular passage migrant,

especially in late summer and autumn. Up to six annually between 4th July and 13th November. One frequented the Ham Burn in December 1954.

A bird flying high over Hamnafield on 25th August 1963 became the object of a vicious attack by a Great Skua. Once the Heron had been driven to the ground the skua soon lost interest but almost an hour elapsed before the Heron moved off.

MALLARD *Anas platyrhynchos*. Stock Duck. An occasional visitor, especially in late autumn. Thought to have bred in 1948 (Pennie 1948). In recent years small numbers have occurred from late July to November, with a maximum count of 9 on Mill Loch from 17th to 23rd October 1954. Odd birds also occurred on 24th-27th March 1955, 13th-16th June 1961, and 4th-7th July 1965.

TEAL *Anas crecca*. Summer visitor. Breeds. Up to four pairs have bred each year since 1954. Venables (1955) suggested that breeding was not regular on the island. On 23rd June 1955 four ducks were seen with a total of 20 ducklings.

WIGEON *Anas penelope*. Seen in winter in the 1890s, but never stayed long (E&B). Since 1954 up to 8 birds between 3rd May and 17th September.

PINTAIL *Anas acuta*. One duck on 26th May 1954. A pair on 29th April 1955 attempted to land on Mill Loch but was disturbed by Great Skuas and flew off to the south. A male in eclipse plumage was on the pools by the kirk on 6th September 1962, and one was on Fleck Lochs on 11th-15th August 1963. Noted singly on 6th July and 4th September 1965.

[MANDARIN *Aix galericulata*. One, doubtless an escaped bird, on 15th and 16th June 1942 (V&V).]

SCAUP *Aythya marila*. Two drakes on 7th August 1957, another on Mill Loch from 4th September 1958 until observers left on 8th, and one from 21st to 26th June 1965.

TUFTED DUCK *Aythya fuligula*. A pair in late November 1892 and two in 1895 (E&B). A drake on 27th May 1955, and a duck on Mill Loch from 27th July to 2nd August 1961. One on 17th July 1965.

POCHARD *Aythya ferina*. One on 6th September 1964.

GOLDENEYE *Bucephala clangula*. A drake on 17th and 18th and a duck on 30th October 1954.

LONG-TAILED DUCK *Clangula hyemalis*. Calloo. Although a regular winter visitor to Shetland there are very few records for Foula. Frank Traill saw only one in the winter of 1892-

93. Up to five, mostly drakes, were recorded between 20th September and 14th November 1954.

VELVET SCOTER *Melanitta fusca.* An adult drake in Ham Voe on 22nd July and a duck there on 9th August 1963.

COMMON SCOTER *Melanitta nigra.* Surprisingly uncommon summer visitor. Six, four drakes and two ducks, on 10th June 1955, one on 31st August 1959, and one on 7th July 1960.

EIDER *Somateria mollissima.* Dunter. Resident. Breeds. No estimate of numbers before a count of about 30 breeding pairs in 1960, and no apparent change since then. Nests are found not only near the shore but frequently on Overfandal and in the Fleck Loch area at heights up to 650 ft. Females with young chicks can usually be seen scattered along the coast into early September. Many of the young are taken by skuas and gulls and breeding success is probably very low. There is a large non-breeding population, and total numbers of Eiders are usually between 350 and 500 during August, when males outnumber females three to one.

RED-BREASTED MERGANSER *Mergus serrator.* Eight records of single birds, mostly off Ham Voe between 13th May and 24th October, all since 1954.

SHELDUCK *Tadorna tadorna.* One from 30th July to 5th August 1964.

GREY LAG GOOSE *Anser anser.* One on 1st May 1954 was reported by islanders to have been there since the previous autumn, consorting with domestic geese. Up to 16 from 24th June to 30th July 1965.

BEAN GOOSE *Anser arvensis arvensis.* One on 15th June 1955.

PINK-FOOTED GOOSE *Anser arvensis brachyrhynchus.* One wintered in 1955 and another, which had apparently been frequenting the island since December 1958, was seen in August 1959. One caught at Liumisheddon on 15th August 1962. Twelve grey geese flying NW on the evening of 3rd September 1959 were probably of this species.

WHOOPER SWAN *Cygnus cygnus.* An occasional winter visitor to Mill Loch. One on 9th April 1955, two on 18th June 1955, and one from mid June until 26th July 1962. All other records fall between 15th August and 8th November, with most from mid October. Birds have been recorded arriving from the west and passing over Foula towards the Mainland. The maximum recorded is 7 on 30th September 1954.

WHITE-TAILED EAGLE *Haliaëtus albicilla.* Erne. The first mention of breeding on Foula was in 1809 (B&R). Drosier

recorded breeding in 1830, Hewitson in 1832 and T. Edmonston in 1843. There is no evidence when the eyrie was last occupied, but a clutch of two eggs was taken in 1900 and again in 1901 (B&R). The last occurrence on Foula is reputed to be of a dead bird which was washed ashore in 1903 with its claws embedded in a halibut, too large for it to lift.

HEN HARRIER *Circus cyaneus*. On 19th February 1955 two were seen by Peter Rattar chasing Starlings near his croft, and later in the day Mylne saw a male flying south over the snow. On the following day a male flew south off Ham Voe while the Christmas mail was being unloaded from a relief boat. One on 25th June 1965.

PEREGRINE *Falco peregrinus*. Stock Hawk. Evans recorded one, possibly two, pairs breeding in 1877 (E&B), and a pair was reported screaming on the Noup in 1955. The islanders say that odd pairs nested, but not in every year. Single birds have been seen on occasions from July to September in each year from 1957 to 1963 by Brathay parties, but not in 1964 or 1965, and there is no evidence of breeding in these recent years.

MERLIN *Falco columbarius*. Maalin. Passage migrant. There has been no evidence that the species breeds at all since Venables (1955) stated that "we do not know whether breeding is regular or only sporadic in Foula." In 1954 and 1955 up to 3 birds were recorded between 9th February and 28th May. Autumn occurrences in recent years have been between 18th July and 18th October. In 1954 Merlins were noted on 23 days between 15th September and 18th October, but since 1960 single birds only have been seen and none was noted in 1964 or 1965.

KESTREL *Falco tinnunculus*. A spring and autumn migrant in small numbers. Four spring records of single birds between 1st and 14th May in 1954 and 1955. One or two birds every autumn 1954-64 (except 1956 and 1964) between 28th July and 19th October, with the majority in late August and early September.

QUAIL *Coturnix coturnix*. Deadchick. Occasional summer visitor. Records since Venables have been of one calling between 9th June and 7th July 1955; one seen on 3rd August 1958 which had apparently been present for most of the summer; one bird certainly, and a second possibly, calling on 13th June 1960—islanders reported that birds had been present for about three weeks previously; and one seen in his crops by John Holbourn on 19th August 1964. One on 28th June 1965.

WATER RAIL *Rallus aquaticus*. A passage migrant and regular winter visitor (V&V). On 29th April 1954 one was caught at South Biggins when there were several in ditches at the south end. Single birds were seen until 10th May.

SPOTTED CRAKE *Porzana porzana*. One was well seen at close range in a roadside ditch above the School on 4th September 1961.

CORNCRAKE *Crex crex*. Formerly bred. Eggs were taken in 1897, but long since extinct as a breeding species. There are a few records for recent years. One male present in early June 1948, and up to 4 in five years since 1954, between 4th May and 27th August.

MOORHEN *Gallinula chloropus*. Has bred. Scarce passage migrant. A pair or so used to breed on Foula but they are recently extinct (V&V). On 1st September 1959 two partly-grown young and two or more adults were seen in the Hametoun Burn. Other records presumably refer to birds of passage: 12 around Hametoun on 24th April 1955, single birds on 31st August and 1st September 1958, on 18th August 1961 and on 12th August 1965.

COOT *Fulica atra*. An injured bird present during the spring of 1963 was cared for by Ken Gear.

OYSTERCATCHER *Haematopus ostralegus*. Shelder. Summer resident. Breeds. Passage migrant. No estimates made of breeding population before 1960. From 1960 to 1963 between 12 and 20 pairs breeding, with rather more in 1963 than in the three previous years. Parties of non-breeding birds are present each summer and frequently number 50+ birds. About 110 were at the Boulder Beach on 10th August 1959. In 1954 six birds remained until December. None was seen subsequently until 15 on 13th March; numbers increased to 30 by 21st.

A tame bird known as Charlie, originally hand-reared by an island boy, returned to certain crofts each summer from 1954 to 1960. It was in the habit of taking shell fish, and even expedition biscuit from the hand. In its first winters, which it spent on the island, it came regularly into the crofts. At South Biggins is would keep the dogs away from its favourite place in front of the stove, and could be quite aggressive to humans as well. Later, this bird, which was recognisable by its tameness and an old break in one of its toes, was known to spend each winter in Lerwick.

Ringed	Recovered	
pull. 8.8.61	14.5.65	Karmoy Island, Norway, 59°20'N, 5°15'E.

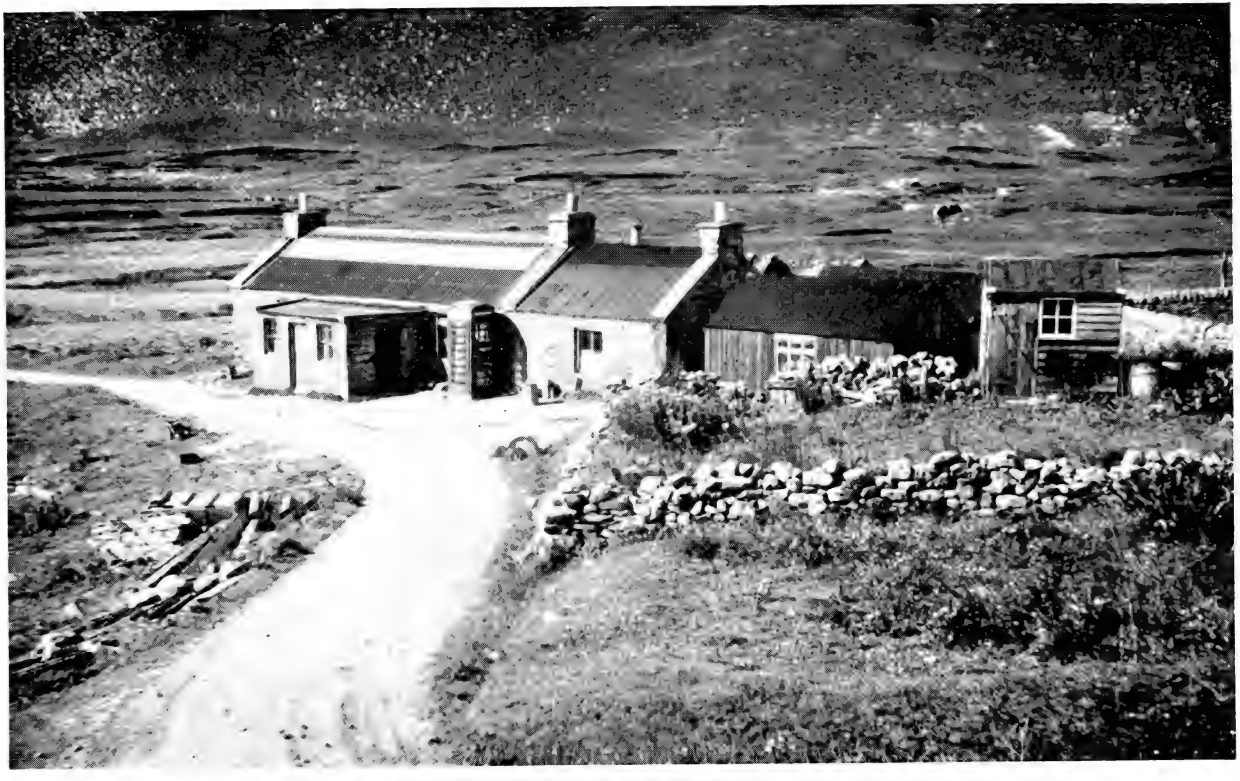


PLATE 1. Foula Post Office (flat-roofed building) and croft, showing limited cover in the walled area, the moor and peat workings, and the rock-strewn slopes of Hamnafield beyond.
Photograph by C. K. Mylne

PLATE 2. The Mill Loch, the largest stretch of fresh water on Foula, used for bathing by Bonxies, Fulmars and gulls, and as a feeding area by migrant waders. It contains brown trout and sea trout.

Photograph by E. E. Jackson

PLATE 3. Bonxies bathing in the Mill Loch. This is a familiar sight on Foula and up to 175 have been counted at once.
Photograph by C. K. Mylne

PLATE 4. Ham Voe and the Mill Loch, showing plantiecrubs and peat workings (*bottom left*) and the layout of the central crofting area, on the east side of the island.

Photograph by E. E. Jackson

PLATE 5. Wester Hoevdi on the west side of the island, with auk and Kittiwake colonies. Though by no means the highest cliffs, being only about 500 ft at the lowest point shown, these are the sheerest.

Photograph by E. E. Jackson

PLATE 6. The Sneug and the Kame from the east across the moor: Bonxies breed throughout this area.
Photograph by E. E. Jackson

PLATE 7. The deserted north end of Foula, with a ruined croft, storm beach (or boulder beach) and stacks.
Photograph by C. K. Mylne

PLATE 8. A winter gale at Ham Voe, the island's only suitable landing place for the mailboat, which is drawn up the slipway for safety. The Haa and shop are beyond.

Photograph by C. K. Mylne

LAPWING *Vanellus vanellus*. Tieves Nicket. Breeds occasionally. Passage migrant. Only one breeding pair in 1948, but R. Isbister of South Biggins said there had previously been about six pairs (V&V). There was a large reduction over the whole of Shetland after the abnormally severe winter of 1946-47 and the population took several years to recover (V&V). In 1960 up to 10 pairs were seen regularly in June and early July, and the species was thought to breed at both north and south ends of the island. In 1961 four pairs were present throughout the summer, but only one pair reared any young. In July 1962 a single bird occupied territory in Ristie marsh where a second bird was found freshly killed. There was no attempt at breeding in 1963. On 24th March 1955 there was a considerable influx following an easterly gale. Birds were scattered all over the island, with about 100 round the school in the morning. Small migrating parties of up to 12 Lapwings have also been noted during the period July-October.

RINGED PLOVER *Charadrius hiaticula*. Sandi Loo. Summer resident and passage migrant. During the period 1960-63 from eight to twelve pairs bred each year along the northern and eastern sides of the island. Numbers build up during August and early September with maxima usually between 25 and 40 birds; 62 were present on 27th August 1960.

Ringed	Recovered	
pull. 1.8.57	28.7.58	Tresta, Mainland; 28 ml ENE.

GREY PLOVER *Charadrius squatarola*. Two on 11th August 1965.

GOLDEN PLOVER *Charadrius apricarius*. A passage migrant in both spring and autumn, with a few birds occasionally seen throughout the summer. Usually most numerous from mid August to early September, with up to 30-40 birds fairly regularly; 80 were present on 25th April 1954.

TURNSTONE *Arenaria interpres*. Ebb Pecker. A regular passage migrant and winter visitor, but with some summer records in recent years. Autumn birds usually begin to arrive in early to mid July and numbers build up steadily during August, reaching a peak towards the end of the month. The largest flock recorded is of 100 birds on 9th November 1954. By October Turnstones can be seen feeding regularly with Redshanks on the rigs, and during a period of bad weather in December 1954 birds were feeding freely inland in flocks of 40-50. There were frequent records during May 1954, with 5 as late as 29th and 6 on 26th June. In 1955 ten birds were in almost complete summer plumage on 27th April.

The last were seen on 6th May. Four were seen on 14th June 1961. Available information from islanders and Brathay observers suggests that a few birds spent the full summer of 1963 on the island.

SNIPE *Gallinago gallinago*. Snippick. Very common at all seasons. In early June 1960 about 30 pairs were estimated to be on the lower eastern half of the island, and later birds were found to be equally numerous on higher ground, particularly in the Overfandal and Fleck Loch areas. Three nests were found over 1000 feet. The island's breeding population was estimated at 60-70 pairs. In every year 1956-64 nests with eggs or small young have been found in August, with latest date for newly hatched young 25th August 1961.

Ringed	Recovered	
f.g. 9.9.61	27.11.62	Hareyo, Spain, 42°28'N, 3°34'W.

JACK SNIPE *Limnocryptes minimus*. Frank Traill reported this species as occurring in September and October (E&B). It is probably regular on passage in small numbers, and has occurred singly on 10th May 1954 and in the autumn of eight years since 1954 between 11th August and 26th November.

WOODCOCK *Scolopax rusticola*. A number occurred in the autumn of 1898 (E&B); 2 between 29th October and 26th November 1954; and several in the third week of January 1955 were probably only seen because of snow, making the birds more conspicuous; one on 18th July 1962.

CURLEW *Numenius arquata*. Whaup. Does not breed. Small parties of Curlews occur fairly regularly from May (earliest date 4th) to early July. From then until October they become much more numerous, with flocks of up to 40. A few birds were about the island from November 1954 to February 1955, and some 25-30 throughout March 1955, but none in April.

WHIMBREL *Numenius phaeopus*. Peerie Whaup. A regular summer visitor (extreme dates 29th April-9th September). Does not breed. Numbers are usually below 12, but flocks of 20-25 doubtless passage birds are occasionally seen, as on 17th August 1962 and 16th August 1963. A flock of 42 on 21st August 1963 was exceptional.

BAR-TAILED GODWIT *Limosa lapponica*. Occasional passage migrant. Recorded in five years since 1954, with up to 5 birds between 4th August and 24th September.

GREEN SANDPIPER *Tringa ochropus*. Venables lists only seven

occurrences of the species in all Shetland, yet since 1954 it has been noted on Foula in every year except 1963. There is one spring record for 30th April 1955, and about 40 autumn records between 13th July and 6th September. Records are usually of one or two birds about mid August; 6 were present on 23rd August 1962.

Wood Sandpiper *Tringa glareola.* Single birds on 25th May and 27th July 1954. A very tame bird fed by Gossa Loch from 30th August to 8th September 1958, and one was present on 5th-9th and 18th-23rd August 1962.

Common Sandpiper *Tringa hypoleucos.* A few birds appear on passage in spring and autumn, though no more than 3 have been recorded at one time. Seen in each month from May to early September.

Redshank *Tringa totanus.* Ebb Cock. Does not breed. Seen regularly each year from early July with numbers seldom exceeding 30. The maximum recorded was 57 on 22nd August 1962. Mylne reported birds present in winter.

Spotted Redshank *Tringa erythropus.* Neither B&R nor V&V list this species for Shetland. Single birds have occurred on Foula from 27th August to 8th September 1958, on 1st September 1959, on 4th August 1962 (with 3 on dates between 5th and 10th), and from 7th to 15th August 1964.

Greenshank *Tringa nebularia.* Occurs regularly on autumn passage during August and early September, usually only one or two birds, but 4 were at Strem Ness on 25th August 1960. In 1961 one was present on 14th July.

Knot *Calidris canutus.* Ebb Cock. Not recorded by F. Traill during his time on Foula (E&B), though it is now a regular autumn migrant in small numbers. On 17th July 1960 a bird in full breeding plumage was present and other red birds have been seen up to mid August. Numbers are usually small. Maxima in recent years have been 34 on 20th August 1959, 27 on 23rd August 1962, and 35 on 16th August 1963. Most have moved on by early September.

Purple Sandpiper *Calidris maritima.* Ebb Sleeper. A regular winter visitor. F. Traill reported the species as "exceedingly abundant in the winter months, generally on the coast, but occasionally on lochs and burns." In the autumn storms of 1954 they were often seen feeding and resting on stubble and up on the rigs around the crofts. The earliest arrival date is 3rd July 1965, but birds are seldom seen regularly until August. In recent years there have been up to 33 birds present during August and Sep-

tember. The species was recorded all through October and November 1954, and from 23rd March 1955, with 20 on 4th May and the last one on 13th May. A few were present until late May 1963.

LITTLE STINT *Calidris minuta*. Three on 14th August 1963, and one or two from 22nd August to 12th September 1965.

TEMMINCK'S STINT *Calidris temminckii*. One on 10th and 11th June 1954.

PECTORAL SANDPIPER *Calidris melanotus*. Two birds frequented grassy pools near Ristie from 31st August to 7th September 1961. One was caught and ringed. One caught on 18th September 1965. The 1961 record is still being considered by the Rarities Committee.

DUNLIN *Calidris alpina*. Ebb Cock. Bred successfully in 1965; the first breeding record. Mostly seen in autumn, but there are several records for June in recent years and the species is probably regular at this time. The earliest autumn date is 20th July 1962 and after this birds are seen regularly. Numbers seldom exceed 6, but about 40 were seen on 22nd August 1965—a year in which the species was particularly numerous.

CURLEW SANDPIPER *Calidris testacea*. One in September 1896 (E&B). One on 9th September 1965.

SANDERLING *Crocethia alba*. Occurs regularly on autumn passage in small numbers, with the earliest date 19th July 1962. A maximum of 20 on 8th September 1954 is recorded. Birds are still on the island when Brathay observations finish in early September.

RUFF *Philomachus pugnax*. Regular autumn migrant. Recorded each year 1954-65 between 3rd August and 24th September, with a maximum of 9.

RED-NECKED PHALAROPE *Phalaropus lobatus*. One "procured" by Frank Traill on 28th August 1898 (E&B). Dr H. Holbourn recorded "one in autumn in the 1930s", and one was seen by Mrs D. M. Gear on 15th June 1961.

GREAT SKUA *Catharacta skua*. Bonxie. Summer resident. Breeds. See separate article.

ARCTIC SKUA *Stercorarius parasiticus*. Allan or Scootie-allan. Summer resident. Breeds. See separate article.

LONG-TAILED SKUA *Stercorarius longicaudus*. One was present in May and June 1958 (J. Gear).

IVORY GULL *Pagophila eburnea*. One was captured on 8th December 1892 and sent by Frank Traill to the Edinburgh Museum of Science and Art. It was caught by means of

a rod and line, the hook being baited with a bit of fish (Clarke 1893).

GREAT BLACK-BACKED GULL *Larus marinus*. Swaabie. Resident and visitor. Generally numerous in Shetland but not so on Foula. Drosier (1831) saw only a few pairs in 1828, Graves and Ralfe (1899) found them rather scarce in 1898, and Venables found very few breeding pairs in 1948. Careful estimates in 1960 put the breeding population at about 15 pairs. It has been suggested that the large number of skuas on Foula tend to keep down the number of breeding gulls. At the present time this would seem a reasonable argument, but it would not account for the situation in the 1800s when skuas were far less numerous. During July and August additional flocks of up to 300+ birds may be seen, especially after easterly winds; they seldom stay long. Great Blackbacks were considered more numerous during the colder months in Foula (E&B). In 1954 numbers increased up to 100 by mid October but decreased during November.

LESSER BLACK-BACKED GULL *Larus fuscus*. Saide Fool or Peerie Swaabie. Very few breed. Visitor in small numbers. No more than 2 or 3 pairs, all at the south end, in 1960, when one pair was nesting amongst Arctic Terns at South Ness. In 1963 P. J. Reay reported a Lesser Blackback × Herring Gull pair sharing incubation of a clutch of 4 eggs on Logat Stack. Totals of 30+ on 4th August 1957, up to 25 from 1st to 8th September 1961, and about 50 on 21st August 1965 would seem to have been exceptional.

One of the Scandinavian race *L. f. fuscus* on Wester Hoevdi on 25th August 1963.

HERRING GULL *Larus argentatus*. Maa. Scarce compared with the mainland distribution. In 1960 there were about 20 pairs along the east and south sides, with probably rather more on the west. Up to 200 birds recorded, but numbers are very variable and increases in the normal resident population have been noted in most months.

COMMON GULL *Larus canus*. Peerie Maa. Three pairs bred in 1954, and a pair attempted to nest near Loch Croft in 1955 but lost their eggs. In 1960 there were probably no more than 5 pairs nesting, all on the eastern side. Increases in the population are noted in August and September, with recent examples of 26 on 8th August 1954, about 40 on 11th August 1956, about 100 on 1st September 1958, and 4th August 1962, 30 from 1st to 7th August 1963, and about 300 on 16th August 1965. Smaller influxes have been noted in spring.

In the summer of 1955 a Great Skua with a broken wing, swimming on the sea, was attacked and hit by a Common Gull.

Glaucous Gull *Larus hyperboreus*. Iceland Scorie. Regular winter visitor in small numbers. In the winter of 1892-93 Frank Traill reported some dozen birds frequenting the coast. One was seen on 25th August 1963, but most records are from late October with a maximum of 8.

An adult bird in full breeding plumage was seen from 8th to 16th May 1954, but died on this latter date. On dissection it was found that the bird had died of starvation as a result of having a sea urchin stuck in its gullet.

Iceland Gull *Larus glaucoides*. Frank Traill records one in 1893 feeding on marshy ground inland (E&B). An immature bird was present from 10th to 13th July 1955, when it occasionally took scraps from the Voe.

Black-headed Gull *Larus ridibundus*. Peck Maa. Frequent visitor. Many records of up to 4 (once 10) birds between 25th March and 30th September. One or two "in the middle of winter" 1892-93 (E&B). One on 26th-27th November 1954.

Kittiwake *Rissa tridactyla*. Waeg or Rippick Maa. Summer resident. Breeds. See separate article.

Common Tern *Sterna hirundo*. A pair at Ruscar Head between 5th and 26th June 1954, and 2 pairs there on 7th July 1955, are the only records.

Arctic Tern *Sterna macrura*. Tirrick. Summer resident. Breeds. The number of birds and situation of breeding colonies vary considerably from year to year. The main colonies are usually at Strem Ness, Wurrwusbanks and South Ness, but odd pairs can be found at almost any place along the east coast. From 1954 to 1964 the breeding population has varied erratically between 100 and 300 pairs. Birds usually begin to leave the island in late July and most have gone by mid August. In some years however they may still be at their colonies until the end of August. The latest record is of 4 at sea on 14th September 1955.

Razorbill *Alca torda*. Sea Craa or Wilkie. Summer resident in large numbers. No estimates have been made of the breeding population because many ledges are quite invisible from the cliff tops, and a considerable number of birds nest hidden amongst loose boulders at the foot of the cliffs. On a summer day in the 1930s, when large shoals of sand eels were in Gruting Voe, J. Peterson saw at least 3000 Razorbills fishing there and considered that most of these must have come from Foula (V&V). Greenaway re-

corded the arrival of Razorbills and Guillemots on 20th March 1919 and said they were "nesting on the east side of the island and fast increasing." Very few nest there now. Razorbills have not been recorded on Foula after 11th August.

Little Auk *Plautus alle*. Rotchie. Winter visitor, probably numerous at times. The tide streams off Foula are one of the main Shetland wintering places of this species. Frank Traill reported Little Auks as numerous at sea in December 1892 and January 1893 (E&B), and the mail crew have often reported large numbers at sea in winter.

Guillemot *Uria aalge*. Loom or Lung Wheeda. Summer resident in large numbers. More numerous than the Razorbill, with several thousand pairs breeding on the western cliffs. On 27th July 1960 many Guillemots and Razorbills were still present on their breeding ledges and yet the following morning they seemed to have vanished overnight, with only seven further records for either species up to 19th August. A similar overnight disappearance was recorded for 25th/26th July 1961. Frank Traill saw young at sea in the autumn and winter of 1892, and at the beginning of February 1893 a few individuals were noticed on the cliffs in the early morning (E&B).

Of 3418 birds counted in 1960 and 1961 on the northern and western cliffs, 715 were 'bridled', a proportion of 20.9%. Witherby *et al.* (1941) give the proportion of bridled birds on Foula as 24.2%.

Black Guillemot *Cepphus grylle*. Tystie. Common resident. Breeds all round the coast wherever there are suitable boulders. The main concentration of breeding birds is in the Boulder Beach of Wurr Wick and, though numbers are difficult to determine, 153 adults were counted here on 10th June 1960. Arctic Skuas frequently sit on the boulders in this colony waiting for birds entering their nest sites with butterfish *Centronotus gunnellus*, which appear to be the young Black Guillemot's commonest food. In 1959 young birds were being fed in at least one nest as late as 6th September. From late August rafts of over 100 birds can be seen off the east side and there has been no apparent decrease in numbers when observations cease in mid September.

Frank Traill records a bird which had attained full summer plumage by 30th January.

Ringed	Recovered	
pull. 9.9.61	30.9.61	Eshaness, Mainland; 30 mls NE.

Puffin *Fratercula arctica*. Norie. Abundant summer resident.

Countless thousands breed along the western cliffs with smaller numbers elsewhere. Until recently the species was thought to be increasing and many Manx Shearwater burrows had been taken over by the Puffin. In 1962 and 1963 it was noted that Puffins were absent or present in reduced numbers in some of the smaller colonies. It was also felt that the density of birds on the western cliffs was less than in 1959 and 1960. Both adult and young birds are frequently taken by Bonxies on Foula, but there is no evidence that this is the cause of any decrease, which may be following the pattern of similar decreases elsewhere. In 1955 the first birds of the season were seen on 2nd April. Most birds leave the cliffs during the last week of July and the first week of August, and very few remain by mid August. The latest record is of one on 5th September 1960. Two were seen during the winter of 1892-93 (E&B).

Rock Dove *Columba livia*. Doo. Resident in small numbers. Evans' and Buckley's statement that "Foula is hardly such a stronghold of the rock dove as might be expected from its nature and position" still holds good. The summer population seems to vary from 20 to 40 birds and, apart from the locality of one or two traditional nesting sites, there is no information about the breeding of the species in Foula. Flocks of up to 20 birds may often be seen, especially on newly sown corn on the rigs in spring, when they can be quite a menace to crofters who sow and harrow by hand. A maximum flock of 65 was recorded on 8th May 1954. Birds became scarce in December 1954 during bad weather, but numbers were back to normal in January.

Racing pigeons occur very occasionally on Foula but seldom stay for more than a few days. Some interbreeding has however occurred.

Woodpigeon *Columba palumbus*. Occasional visitor. Sixteen records 1954-65, mostly in May and June, between 1st May and 8th November.

Turtle Dove *Streptopelia turtur*. Passage migrant in small numbers. Single birds recorded in spring on 5th July 1954, 1st June 1955, 7th June 1963 and 23rd-24th June 1965. More regular in autumn with up to 4 birds between 20th August and 15th September in all recent years.

Collared Dove *Streptopelia decaocto*. One from 31st May to 2nd June 1963, and several records by islanders from May to August 1964 and 1965.

Cuckoo *Cuculus canorus*. Occasional visitor. Several spring records between 12th May and 10th June. In 1960 single

adults were at Ham on 9th and 10th June and islanders reported that 2 birds had been about; a juvenile was at Ham on 18th-20th July. The only two autumn records are of juveniles on 6th September 1958 and 25th August 1963.

Black-billed Cuckoo *Coccyzus erythrophthalmus*. On 11th October 1953 Mrs D. M. Gear found an exhausted bird which subsequently died and was sent to the British Museum (Sims 1953; Williamson 1954).

Scops Owl *Otus scops*. Of five Shetland records two come from Foula; one in late April 1900 (Clarke 1900), and one on 10th May 1926 (Greenaway 1926).

Long-eared Owl *Asio otus*. Occasional visitor. One was blown ashore after heavy gales a week before 27th October 1898 (E&B); Greenaway captured one on 19th June 1919; and one was seen from 9th to 12th May 1954. The islanders reported several in the autumn and winter of 1963-64.

Short-eared Owl *Asio flammeus*. Catyogle. Occasional visitor.

1954—Single birds 31st May-2nd June, 9th August, 27th October and 12th-13th November.
1955—One on 31st May.
1958—One on 3rd August.
1959-60—One found with a broken wing at Hametoun by the Isbisters in early May 1959 was kept at South Biggins until August 1960, when it died.

Remains of others were found in August 1963 and 1964, and one was seen on 23rd August 1965.

Nightjar *Caprimulgus europaeus*. Rare visitor. Greenaway recorded one on 29th May 1917 and watched one hawking for moths at midnight on 10th June that year. One was churring in the hills of Foula during the nights of 5th and 6th July 1924, and the species was reported to have been present during the two previous summers (Bishop 1931b). In 1955 single birds were seen at North Biggins on 10th June and near the Manse on 7th and 8th July.

Swift *Apus apus*. Frequently recorded from 4th May to 7th September. Greenaway was "amazed at this derelict" when he recorded one on 5th September 1919 on a warm sunny day. The majority of records are for August, and the maximum number recorded is about 30 on 27th August 1958. A bird flew from a hole on the northeast slopes of Soberlie hill on 27th July 1960—a year when odd birds were seen far more regularly than usual about this period

—though a subsequent search failed to reveal any signs of a nest.

HOOPOE *Upupa epops*. One seen on 10th June 1957 by G. H. Davenport.

GREAT SPOTTED WOODPECKER *Dendrocopos major*. Rare visitor. The islanders report that they have seen birds very occasionally in autumn, but no dates have been recorded. One was seen near the Hametoun Burn on 17th August 1963.

WRYNECK *Jynx torquilla*. Occasional visitor. One captured alive in a byre on 30th April 1898 (Traill 1898); since 1954, one spring record for 10th May 1954 and 9 autumn records between 24th August and 4th October.

WOODLARK *Lullula arborea*. One on 4th November 1954.

SKYLARK *Alauda arvensis*. Laverock. Breeding pairs are scattered all over the island making numbers very difficult to assess, but probably 20-30 pairs. Influxes have been noted during August and early September, particularly after periods of northwesterly winds. Many birds leave the island for the winter, although a few can usually be seen even then.

SWALLOW *Hirundo rustica*. Regular migrant in small numbers. On 6th July 1924 a nest was found on the beam of a stone out-building. The adult birds were hawking in the vicinity and the nest (which was not disturbed) was thought to contain young (Bishop 1931a). Up to 15 birds in a day have been recorded on many dates between 27th April and 19th October.

HOUSE MARTIN *Delichon urbica*. Regular migrant. R. Isbister reports the species as having nested once, and in 1958 House Martins attempted to breed in the old kirk but gave up when the nest collapsed. A regular migrant, usually in very small numbers, with extreme dates 3rd May and 3rd October. Appears to be more regular in spring than autumn. About 50 birds were seen on 2nd June 1955.

SAND MARTIN *Riparia riparia*. Single birds between 10th May and 29th June on five days in 1954, two days in 1955 and one in 1963. One on 29th August 1960 and one on 2nd September 1959. Eleven on 3rd and one on 4th September 1965.

RAVEN *Corvus corax*. Corbie. Two to three breeding pairs on the island up to 1960, but probably no more than one pair each year since then. The species is certainly less numerous than it used to be and is sometimes shot or the nests destroyed by the islanders. In the years 1956-59 up to 10 birds were frequently seen in a day, but it is now

quite exceptional to see more than half a dozen. It seems probable that parties of Ravens from Shetland occasionally visit the island. On 17th October 1954 there was a flock of 27 birds over Hamnafield and others were seen later. Smaller influxes have also been recorded on 24th March 1955 and 11th August 1963.

Ringed	Recovered	
juv. 11.6.60	18.1.61	Foula.

Carrion Crow *Corvus corone corone*. One from 15th to 17th May 1954, and one on 17th July 1965, when 2 freshly dead corpses were also found.

Hooded Crow *Corvus corone cornix*. Hoodie Craa. Resident in small numbers. One or two pairs breed in most years. Seldom more than five birds seen in a day; 13 on 14th September 1954 were considered not to be island birds.

Rook *Corvus frugilegus*. An occasional visitor, usually after southerly winds. In the years 1917-19 Greenaway recorded birds on 5 occasions between 7th February and 12th May with a maximum of 50 on 29th March 1918. Ten arrived after a week of southeasterly gales on 26th November 1954, and were still present the following day. Two were at Ham on 19th March 1955.

Jackdaw *Corvus monedula*. One on 12th February 1918.

Great Tit *Parus major*. A single bird spent most of the 1959-60 winter about Ham (Mrs D. M. Gear).

Wren *Troglodytes troglodytes*. Robbie Cuddie or Stenkie. Resident. A not uncommon breeding species. In the summer months singing birds occur around crofts, along walls and among boulders, ranging from cliffs at sea level to the top of the Sneug. In December 1954 birds were apparently occupying the same territories as during the summer. The birds were badly affected by the severe weather of January-March 1955 and none was seen on inland territories, except on one occasion, until mid June. Numbers in cliff territories were also much reduced.

Fieldfare *Turdus pilaris*. Regular migrant. Passes through in small numbers each spring. In 1954 this passage occurred from 3rd to 12th May (the latest spring date) with 50 on 7th. In 1955 birds were seen between 3rd and 9th May with a maximum of about 15 birds on any one day. In 1954 the first autumn birds appeared on 8th October, but there was no inrush until 17th-19th, when 300 were noted; about 200 on 27th had increased to about 1000 by the 29th, with a further increase on the 30th. These immigrants mostly left the island at dusk in flocks of 50+. This

was most noticeable at South Ness where flocks could be heard and occasionally seen climbing to gain height as they left in company with Blackbirds. One alighted in a field at Ham for a few minutes in thick fog on the exceptionally early date of 21st August 1959, and one occurred on 7th September 1962. First noted in September 1965 on 8th and over 300 on 27th.

Song Thrush *Turdus philomelos*. Occasional visitor. One which arrived on 27th February 1919 and stayed for several weeks was the only Song Thrush seen in 7 years on Foula by W. H. Greenaway. From 1954 to 1964, there were 14 records of single birds between 5th March and 28th October, with 2 on 26th, 7 on 27th and 5 on 28th September 1965.

Redwing *Turdus musicus*. A regular spring and autumn migrant. A typical autumn movement in 1954 started on 8th October with 300+, which had moved on by next day; the maximum number recorded was about 500 moving south on 16th October; smaller numbers were noted until the end of the month. In 1962 single birds were seen on 4th and 7th September. The last dates for spring birds in 1954 and 1955 were 11th and 13th May respectively.

Ringed	Recovered
1st. W. 12.9.65 Fair Isle	14.9.65 Foula.

Ring Ouzel *Turdus torquatus*. On 29th April 1917 Greenaway recorded a flock of about 40 which stayed only one night after arriving on a northeast wind. A pair was seen on 7th June 1955. In 1960 several islanders reported that a bird had stayed for several weeks in May and June and had been in song near Mill Loch. One was seen on 31st August 1960. A singing male was recorded on 20th June 1963. One on 28th September 1965.

Blackbird *Turdus merula*. Black Starrie. Breeds in small numbers. Passage migrant. Greenaway recorded a few, mostly single birds, in October and November 1917-20, with one on 27th February 1919. First bred 1930 (Greenaway 1930) and has continued ever since. Since 1954 about 12 pairs have nested each year. In 1954 autumn movements were noted on many dates from 8th October to 4th November with a maximum of 100 on 1st November.

Ringed	Recovered	
juv. 15.8.56	19.1.59	South Skeld, Mainland.
juv. 5.8.57	15.7.61	Retrapped Foula.

Wheatear *Oenanthe oenanthe*. Stanechak or Steinkle. Summer resident and passage migrant. A common migrant in

spring and particularly in autumn, when numbers may rise to 200+ on some days in August. Breeding pairs scattered all over the island, but probably more numerous around the open peat banks. Most summer residents have left Foula by the end of July and those seen from August onwards are on passage through the island from the continent or the far north. The latest date in recent years is 4th October 1954, though Greenaway noted 6 on 14th October 1918.

Ringed	Recovered	
f.g. 6.9.62	18.10.63	Gironde, France, 44°34'N, 1°09'W.
f.g. 25.8.63	21. 4.64	Fair Isle (retrapped); 45 mls SSE.

Stonechat *Saxicola torquata*. One on 1st May 1955.

Whinchat *Saxicola rubetra*. Passage migrant. A few records in spring between 2nd and 30th May. More regular in autumn when there are many records of up to 12 birds from 18th July to 28th September, with the majority during the latter half of August and early September.

Redstart *Phoenicurus phoenicurus*. Passage migrant. Fairly regular as a spring and autumn migrant in small numbers, though some years pass without the species being recorded. First and last dates recorded in spring are 23rd April and 31st May, and in autumn 20th August and 24th October.

Black Redstart *Phoenicurus ochruros*. Occasional visitor. Two on 31st May 1948 (Pennie 1948). Since 1954 there have been 7 records of single birds between 18th April and 29th October.

Bluethroat *Cyanosylvia svecica*. One on 29th September 1955 (Mrs J. Rattar).

Robin *Erithacus rubecula*. Migrant and winter visitor in small numbers. Has occurred on passage in autumn from 22nd September, and in spring to 6th May. One on 25th June 1963. Fifteen on 27th September 1965.

Reed Warbler *Acrocephalus scirpaceus*. One on 4th and 5th September 1964, and one on 16th August 1965.

Sedge Warbler *Acrocephalus schoenobaenus*. An occasional passage migrant recorded in spring from 10th May to 2nd June, and in autumn from 18th July to 1st September. Singing birds were recorded on 11th and 12th August 1958 and 18th July 1961.

Icterine Warbler *Hippolais icterina*. One caught in Ham Voe on 7th August and another at Hametoun on 23rd August 1963. One, and probably another, present from 18th to 23rd August 1965.

Blackcap *Sylvia atricapilla*. Regular passage migrant in

small numbers. Recorded in spring from 23rd April to 13th June, and in autumn from 30th August to 7th October. Five were present on 21st September 1954.

BARRED WARBLER *Sylvia nisoria.* A regular autumn migrant in small numbers. It has occurred in most recent years between 14th August and 27th September, with a maximum of 4 birds at one time. All records are of juveniles.

GARDEN WARBLER *Sylvia borin.* Regular passage migrant. Up to 6 recorded in spring between 27th April and 15th June. More numerous in autumn, when they have been noted between 9th August and 16th October. The maximum was 30+ on 25th August 1963.

WHITETHROAT *Sylvia communis.* Regular passage migrant. A few in late May 1898 (Graves & Ralfe 1899). Spring and autumn dates 6th May to 7th June and 11th August to 24th September. A maximum of 6 birds is recorded.

LESSER WHITETHROAT *Sylvia curruca.* Passage migrant in small numbers. One or two in most years with extreme dates 7th May to 18th June and 11th August to 1st October. One caught on 7th May 1955 was of the Siberian race *S. c. blythi.*

WILLOW WARBLER *Phylloscopus trochilus.* Regular passage migrant. Bred successfully in 1949 (V&V). A common migrant in spring and autumn with extreme dates for passage birds of 27th April to 16th June and 7th August to 27th September. Numbers are usually small in spring, but in late August and early September up to 30 are recorded in most years. On 24th August 1963 it was estimated that over 90 were on the island.

CHIFFCHAFF *Phylloscopus collybita.* Single birds on 8th, 9th and 23rd September and 9th October 1954, and on 8th May 1955. One bird present from 29th July to 4th September, and another on 24th and 25th September 1965.

WOOD WARBLER *Phylloscopus sibilatrix.* One on 24th and 25th August 1954; one on 21st and 22nd August 1963, at least 4 on the 23rd, and single birds to 4th September.

GOLDCREST *Regulus regulus.* Greenaway recorded Goldcrests on 22nd October 1918 and 6th-8th October 1920. On this last date, after three days of heavy southeast gales, "Foula had an invasion of Goldcrests and they were scattered all over the isle. Many succumbed." Since 1954 single birds have occurred between 20th July and 17th October. Islanders reported the species as particularly numerous in autumn 1959.

SPOTTED FLYCATCHER *Muscicapa striata.* Irregular passage

migrant. Up to two birds seen in 6 years since 1954. Recorded in spring from 14th May to 13th June and in autumn from 7th August to 27th September.

Pied Flycatcher *Muscicapa hypoleuca*. Regular passage migrant. A few spring records between 4th May and mid June, but more regular in autumn with up to eight between 10th August and 28th September.

Red-breasted Flycatcher *Muscicapa parva*. An adult female was seen in Ham Voe on 21st September 1955; one on 5th September 1964.

Dunnock *Prunella modularis*. Single birds have occurred on 28th May 1955, 27th August 1958, and 8th August 1959.

Meadow Pipit *Anthus pratensis*. Teetick or Hill Sparrow. Summer visitor and passage migrant. Common as a breeding species, and pairs are scattered over the entire island. Probably between 30 and 50 breeding pairs. During August and September birds on passage are frequently seen. Some come down to rest on the island, as did about 300 on 23rd August 1963, but many fly on, sometimes at a considerable height. Such birds are nearly always moving in a south-easterly direction. The return passage in spring is not nearly so pronounced.

Tree Pipit *Anthus trivialis*. One or more present on 22nd September 1954; recorded at North Biggins on 19th September 1955 (J. H. Hyatt); one caught at Hametoun on 25th August 1963; about 5 on 27th September 1965.

Rock Pipit *Anthus spinoletta*. Banks Sparrow. Very numerous as a breeding bird around the rocky coastline and some are to be found on the inland hills. Foula seems to be one of the few places in Shetland where the ranges of the Rock and Meadow Pipits overlap to some extent (V&V). Numbers appear to drop considerably during periods of bad weather in winter. On 19th March 1955 Mylne recorded the first bird for some considerable time at Ham. It is not known whether birds leave Foula for the mainland in severe conditions or whether they find more sheltered places where they are less easily observed.

White Wagtail *Motacilla alba alba*. Kirk Sparrow.

Pied Wagtail *Motacilla alba yarrelli*. The majority of 'alba' wagtails identified on Foula have been *M. a. alba* though there are three records of *M. a. yarrelli*—two birds in Ham Voe on 4th May 1955, one near Ristie on 5th August 1960, and one in Ham Voe on 24th August 1961. There are a few scattered records of 'alba' wagtails in spring, but they become quite numerous each autumn, with up to 40

seen on one day. Extreme dates are 1st August-22nd October.

GREY WAGTAIL *Motacilla cinerea*. One on 19th May 1951. Up to three between 30th July and 31st August in 1959 and 1961-63.

YELLOW WAGTAIL *Motacilla flava*. Single 'flava' wagtails on 23rd-30th September 1954, 27th and 28th August 1958, 5th August and 5th September 1959, and 17th September 1965.

WAXWING *Bombycilla garrulus*. Islanders reported a few in autumn 1960, and said that Waxwings were numerous between 30th October and 30th November 1963.

GREAT GREY SHRIKE *Lanius excubitor*. One on 25th May 1963. A scarce migrant in autumn from late September to November. Islanders reported that a bird at Ham Voe in autumn 1959 fed mainly on Robins, Goldcrests and Siskins which were present at the time.

LESSER GREY SHRIKE *Lanius minor*. One from 8th to 12th August 1956 (Mylne 1957 a, b).

WOODCHAT SHRIKE *Lanius senator*. One on 28th May 1955 (Mrs A. J. Isbister).

RED-BACKED SHRIKE *Lanius cristatus collurio*. An adult male from 25th to 28th May 1954.

STARLING *Sturnus vulgaris*. Starn or Starrie. Common resident. In 1960 there were probably about 100 breeding pairs on the island, the majority nesting at the foot of walls and amongst boulders. Island-bred birds form small flocks from mid July and these build up to several-hundred-strong by the end of August, roosting in the boulder beach, among boulders on the hillsides, or in caves at Logat Head and elsewhere. A sudden increase in numbers in late August 1959 was apparently the result of immigration.

	Ringed	**Recovered**	
ad.	9.5.49 Fair Isle	20.10 52	Foula.

ROSE-COLOURED STARLING *Sturnus roseus*. Robertson (1907) saw 5 or 6 in the garden of the manse on 28th October 1906. Excellent views were obtained of an adult bird near the school on 10th and 12th August 1960. On 13th August the bird was caught by one of the islanders but died soon afterwards.

GREENFINCH *Chloris chloris*. One from 18th to 28th August 1962.

SISKIN *Carduelis spinus*. Reported by islanders as a regular autumn migrant, sometimes in large numbers. One on 7th

May 1954 and two from 10th to 13th July 1961; 2 on 14th September 1965 had increased to about 10 by 27th.

LINNET *Carduelis cannabina*. One on 3rd December 1954.

TWITE *Carduelis flavirostris*. Sistimoustie or Lintie. Common resident. Probably up to 15 breeding pairs in the years 1961-63, mostly in the crofting areas, but also in heather well up the slopes of Hamnafield. In 1955 birds were seen up to the hard weather in early January but were not recorded again until 29th April. Small influxes were noted in early May and complete clutches found in mid June. Every year the numbers increase during July and August, with up to 100 birds frequently recorded. These are all considered to be island birds, but of about 200 present on 9th September 1961 some were almost certainly immigrants.

Ringed	Recovered	
pull. 3.8.58	15.1.60	Westerskeld, Mainland; 25 mls E.

REDPOLL *Carduelis flammea*. One on 30th May 1955, two on 8th and 9th July 1962 and one on 9th and 14th May 1963. There are many records from 5th August to the end of September but comparatively few birds have been definitely attributed to a particular subspecies.

MEALY REDPOLLS *C. f. flammea* were identified on 18th (2) and 27th (8) September 1954 and 27th (1) to 28th (5) August 1959.

Single GREENLAND REDPOLLS *C. f. rostrata* were recorded on 16th September 1954 and 29th-30th August 1959. In summer 1961 Mrs J. Rattar of North Biggins had a bird of this subspecies which she had found injured the previous autumn. In 1955 there was a considerable invasion of Greenland Redpolls into Scotland, and many were observed on Foula. During the first week of September there were said to be many birds about the island, especially at the south end crofts, which had built up to at least 200 by the 16th. Numbers were reduced by 23rd September, after which no further influxes occurred (Williamson 1956).

Ringed	Recovered	
f.g. 15.9.55	12.10.55	Sundraquoy, Uyeasound, Unst; 55 mls NE.

SCARLET GROSBEAK *Carpodacus erythrinus*. Occasional autumn visitor. One from 16th to 21st September 1954, single birds on 16th and 23rd September 1955, one from 2nd to 5th September and another on 5th and 6th September 1959, one caught on 11th September 1961, one from 10th to

13th September 1965 and two from 14th to 16th. All records are of female or first-year birds. The 1961 and 1965 records are still being considered by the Rarities Committee.

CROSSBILL *Loxia curvirostra*. Irregular passage migrant. The first record for Foula is 16th August 1894 when birds arrived "after a strong breeze which blew from N.W. to N.E. during the two preceding days." There were 5 more birds on 3rd September. Since 1958 Crossbills have been seen in most years, between 7th July and 8th September, and occasionally in good numbers; 75 were on Hamnafield on 18th July 1962. In 1963 birds were seen from 13th July to 8th September with a maximum of 40+ on 16th August.

A straggler from the 1962 invasion remained on Foula, and in weakened condition was caught and kept in a bird cage. When released it returned to feed in the open cage every day and in bad weather even returned to roost in the croft. After a 12-month stay on the island it finally left, with other Crossbills, in September 1963.

Venables mentions Crossbills feeding on blaeberry fruits in the hills of Foula. In recent years birds have fed mainly on seeds of thrift, but ragwort and various grass seeds are taken, and one bird fed on ears of barley.

TWO-BARRED CROSSBILL *Loxia leucoptera*. An immature bird on 21st August 1959.

CHAFFINCH *Fringilla coelebs*. A common migrant elsewhere in Shetland but recent records for Foula have been few, partly because of lack of observers between late autumn and May. One or two birds on five dates in October and November 1954; two on 22nd April 1954; single birds from 29th July to 8th September with an additional bird on 4th and 5th September 1958; single birds on 13th June, 20th August, 1st and 2nd September 1960; two on 13th and one on 18th July 1961; and one on 10th August 1962. About 50 arrived on 27th September 1965.

BRAMBLING *Fringilla montifringilla*. In 1954 the first of the autumn was on 14th October with influxes of about 100 on 16th and about 50 on 28th; single birds were recorded on 4th and 7th May 1955, with two more on 11th; an adult male was present from 6th to 10th August 1957. The first in 1965 was on 3rd September, and about 20 were present when observations ceased on 28th September.

CORN BUNTING *Emberiza calandra*. Formerly bred. Common in June 1890 (Barrington 1890b) but when Venables visited the island in 1948 the species had ceased to breed. The only recent record is for a single bird from 4th to 10th May 1954.

YELLOWHAMMER *Emberiza citrinella*. One on 7th April 1919. One on 2nd April 1964 (Mrs J. Rattar).

RED-HEADED BUNTING *Emberiza bruniceps*. An adult male from 6th to 22nd August 1961 and another from 10th to 24th August 1963. A further bird was caught on 16th May 1964, whilst in a weakened condition, and kept in a cage until recovered. It was later ringed and released and was still present on 7th September. This species is now commonly kept in captivity and this is thought to be the reason for the great increase in the number of records of it in recent years. For the same reason the Rarities Committee has not considered the records although the species was still on its list in 1961.

ORTOLAN BUNTING *Emberiza hortulana*. One with House Sparrows on 12th May 1954, and an adult male from 5th to 9th September 1963.

REED BUNTING *Emberiza schoeniclus*. Occasional passage migrant. Four spring records between 23rd April and 27th May in 1954-55. One from 21st to 23rd August 1963, and 2 on 27th September 1965.

LAPLAND BUNTING *Calcarius lapponicus*. Passage migrant. One on 6th and five on 10th May 1954. The earliest autumn date is 27th August. Numbers have usually been small but about 50 were present on 6th September 1959.

SNOW BUNTING *Plectrophenax nivalis*. Snaa Fool. Common winter visitor and passage migrant. There is a rather doubtful account of breeding (E&B). In 1954 there were 3 on 1st May, 10-15 between 8th and 11th, and one or two until 18th. Two on 15th September were followed by 4 on 19th and they were regular from 21st. The chief arrivals were 10 on 25th September, about 30 on 6th, 24th and 30th October, about 150 increasing to about 350 from 1st to 3rd November, about 300 on 9th November and a maximum of about 1000 on 11th November. In spring 1955 birds were present until 24th May, and one was singing on 9th March. A few have been seen in most recent years, with the first of autumn noted as early as 5th September, and spring birds present until 25th June.

HOUSE SPARROW *Passer domesticus*. Kirk Sparrow. Resident. Common round crofts. Venables was told that House Sparrows were more numerous on Foula (and elsewhere in Shetland) before people plastered the outsides of their stone-built houses and thereby destroyed nesting sites.

In 1960 numbers were estimated at about 60 birds in early July, the majority being adults. Numbers increased in Aug-

ust, no doubt due to the presence of young birds. The population was thought to be rather less in 1963. There is an interesting account of a xanthochroic mutant "as yellow as a canary" which the islanders recall "many years ago."

Ringed	Retrapped
juv. 18.9.55	8.9.61

TREE SPARROW *Passer montanus*. One on 7th and 8th May 1955; up to 7 between 12th July and 15th August 1962, one amongst Crossbills on 20th August 1963, and one from 1st to 4th September 1965.

Acknowledgments

The Brathay Exploration Group first visited Foula in 1956 at the invitation of the laird, Mrs M. C. S. Holbourn. One of the Brathay leaders, Ioan Thomas, had met Mrs Holbourn while he was leading a Friends Work Camp in Edinburgh. Without this initial contact Brathay would probably never have visited Foula.

In preparing the script I have had considerable help from R. F. Dickens and valuable comment and criticism from Dr I. D. Pennie and C. K. Mylne, who has also contributed the Appendix and four of the photographs. I would also like to thank Mr and Mrs G. Waterston for access to the Scottish Ornithologists' Club library in Edinburgh.

Over 350 members of Brathay Expeditions have worked on Foula, and much credit and thanks must go to them for their efforts. No expedition can hope to carry out good field work unless its domestic arrangements regarding equipment and food have been scrupulously planned in advance. We have had first-rate people to do this job, and particular thanks must go to A. B. Ware, the Brathay Secretary, for doing the bulk of this work in the earlier years, and more recently to A. E. Land and P. J. Mawby.

The people of Foula have received us with a degree of hospitality and friendliness which could surely not have been equalled elsewhere, and have shown admirable tolerance of the calls of wet and hungry ornithologists at all hours of the day and night. To all who have helped in organising, leading and assisting with the work on Foula, I extend sincere thanks.

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Appendix

The significance of Foula as a migration station

C. K. Mylne

The recent growth of the bird observatory system in Britain, and the attention paid to islands as suitable places for the observation of migration, call for a brief discussion of the value of Foula as a station for recording migrants. The systematic list shows how many of the birds recorded on Foula have been passage migrants but it also shows how few of these species were recorded before 1954, before—in other words—observers were present on the island to record them. Since my own residence on Foula from April 1954 to October 1955 members of the Brathay Exploration Group have visited the island annually in summer and early autumn and other ornithologists have made occasional visits.

Only 45 miles to the southeast lies Fair Isle, where more bird species have been recorded than in any other single locality in Britain. It therefore seems worthwhile to establish, even with the rather sporadic observations so far, some sort of comparison between the two islands and to assess the value of Foula for any comparative study. All observers who have worked on Foula agree on one point, that it is really too large an island for accurate census work and that the numbers of birds recorded are directly related to the number of observers. Any strictly numerical comparison with Fair Isle is therefore of very limited value. Even the general rule that Foula seems to have far smaller numbers of most continental migrants has had notable exceptions with some surprising falls of autumn migrants in clear conditions. Several comparisons of migration schedules for the two islands have however been attempted for selected periods when observations on Foula were felt to be providing at least a sample count, and two examples are given below—one of a movement from the northwest and one of a typical incursion from the continent. It must be admitted that these are more interesting for the similarity they reveal in the species involved than for the marked difference in numbers, and undoubtedly they show little more than that Fair Isle probably had more birds and certainly more observers.

The observation of migration on Foula depends on several factors. These are worth listing as a warning of the difficulties of migration study there and the limitations on its value as a migration station:

(a) **The physical difficulty of covering the area**

Foula has almost twice the land surface area of Fair Isle and probably more than twice the cliff area, much of it inaccessible. The area of vertical rock face on the west cliffs and the North Bank is estimated at 150 acres.

(b) **The nature of the landscape**

Although Foula is generally treeless, which in one sense makes observation simpler, such cover as there is can conceal migrants over three miles of the east side in cultivated rigs, ditches and weed growth on disused crofts, sheltered gardens, and plantiecrubs. Some patches of cover are surprisingly dense, and there are deeply indented cliff areas and geos. One or two 'kale yards' contain stunted trees or bushes up to the height of the dykes, including honeysuckle, roses, sycamore, currant bushes, and even tiger liles. The main drainage area of the Hametoun has a lush growth of grasses where the secretive type of warbler or species like Quail or Corncrake can easily escape detection unless heard or accidentally flushed.

(c) **The geographical position, unfavourable for continental immigrants**

Fair Isle lies as part of a north-south chain of islands from Shetland through to Orkney and Caithness with the effect of a 'leading line' of visible landmarks by day and a series of lighthouses by night. Foula is 15 miles west of this line and has no lighthouses. It lies therefore in the shadow of Shetland from the continent, although it is the second highest point of Shetland. By day, migrants are only likely to make a landfall on Foula by chance, having missed Shetland in bad weather. By night, the chances seem even smaller, as the attraction of the lighthouses in poor weather is known to be strong, especially to tired disoriented birds in easterly weather and poor visibility, namely the drift migrants which make up the largest landfalls.

(d) **Arrivals do not stay long unless grounded by bad weather and heavy overcast.**

By day the whole west coastline of Shetland including Fair Isle can be seen and it is possible to see even Orkney 95 miles to the southwest from the summit of the Sneug in exceptionally clear weather. It was my experience that overnight arrivals were often only seen in the first few hours of daylight and had moved on later in the day. Reorientated migrants, *i.e.* drift migrants which move on in

their 'preferred direction' in better weather, are seldom recorded on Foula even after heavy falls on the mainland of Shetland.

In contrast with these adverse factors Foula is clearly better placed for recording migrants from the northwest. Also, like any island, it is a rewarding place for trapping birds in isolated patches of cover. Ringing and measuring even a small sample can provide much information on the nature and size of any movement taking place and the species involved. My own observations were strictly limited in scope by my bachelor life, and necessarily restricted to the central area for my daily sample by my job, although Hametoun is in fact the area where most migrants have been seen. However, daily records of all birds observed were kept on migration schedules provided by the Fair Isle Bird Observatory. On very few occasions could the figures be considered as a census of the birds present except perhaps at weekends, but during the peak of the migration season the central area of the Ham Burn from Leraback down to Ham Voe was covered daily.

In the summer of 1954 a small Heligoland trap was constructed over the 'Foula jungle', the bushes in the Ham yard which are probably the thickest patch of leaf cover on the island. with wirenetting and other materials provided by Fair Isle through the good offices of Kenneth Williamson, and with the help of some of the islanders, the trap was completed by 1st October 1954. Clap-nets and small Chardonneret traps were used in the manse garden and other suitable places. The numbers trapped were never large—213 in twelve months—but in addition some 500 nestlings of resident species were ringed. Fair Isle record cards were completed for all birds trapped. Weighing provided information on the physical condition of some migrants. Since 1956 over 13,000 birds have been ringed by the Brathay Exploration Group.

Several comparisons were made between the migration schedules and those of the Fair Isle Bird Observatory over selected periods when my own records were based on more regular observations. Only one set of figures showed a significantly larger number of birds on Foula and then only of a very few species. This was a passage of northwestern species, mostly Greenland Redpolls, in September 1955. A maximum of 13 birds on Fair Isle compared with up to 200 round the Hametoun crofts on Foula. The Fair Isle birds included several at very low weights, indicating passage over a long distance, probably from Greenland (Williamson 1956). One bird ringed at Foula on 15th September 1955 was recovered at Uyeasound, Shetland, on 12th October, 50 miles north-

east. This type of onward passage was recorded both at Lerwick and at Fair Isle, where on 24th October the average weight of four birds trapped was nearly 18 gm, compared with weights as low as 10.7 gm on first arrival. The normal weight appears to be about 20 gm. In this same September movement ten Lapland Buntings were recorded on Foula on the 6th compared with only single birds on Fair Isle, though at the same time several species of continental migrants—Garden Warbler, Barred Warbler, Pied Flycatcher and Lesser Grey Shrike—turned up on Fair Isle but were not recorded on Foula.

Most comparisons show very much smaller numbers of northeastern immigrants though frequently the list of species was strikingly similar. In the period 26th-31st May 1955, for instance, 27 passerine species were recorded on Fair Isle in a typical late spring movement involving moderate numbers, after a very quiet spell. In this same period Foula produced 14 of these species but all except the hirundines were records of single birds. Where Fair Isle had four Whinchats Foula had two; 15 Whitethroats compared with two, and four Lesser Whitethroats with only one on Foula; 20 Willow Warblers with two and 25 Spotted Flycatchers with only one; Fair Isle had five Red-backed Shrikes and Foula had none; but a Woodchat Shrike was seen the following day. Several other examples could be quoted of this same pattern of events but the numbers would be too subject to observation factors to be worth detailing and further comparison seems pointless. The best example from my own experience of the obvious similarity between the records from the two islands was during the avalanche movement of 4th-5th September 1956 when I was fortunate enough to be on Fair Isle, for a change. There was an enormous influx of passerines, especially Redstarts, Tree Pipits, Whinchats, Willow Warblers and Pied Flycatchers, in poor conditions of mist and drizzle, when drifted birds might perhaps be as likely to turn up on one island as another. I was able to take advantage of the newly installed radio telephone on Foula to put through a call from Fair Isle on the first evening of the rush—probably the first ever telephone call between the two islands. It brought excited confirmation from Mrs Mima Gear of the largest number of migrants she had seen on Foula for many years with most of the dominant species the same as on Fair Isle.

NOTICE TO CONTRIBUTORS

All contributions should be sent to Andrew T. Macmillan, 12 Abinger Gardens, Edinburgh 12. Attention to the following points greatly simplifies production of the journal and is much appreciated.

1. Papers should if possible be typed with double spacing. All contributions should be on one side of the paper only.

2. Topical material for Current Notes should reach the Editors **before the end of March, June, September and December,** at which time they begin to compile this section. All other notes should be sent promptly but important items can be fitted in until a month or so after these dates.

3. Proofs will normally be sent to authors of papers, but not of shorter items. Such proofs should be returned without delay. If alterations are made at this stage it may be necessary to ask the author to bear the cost.

4. Authors of full-length papers who want copies for their own use MUST ASK FOR THESE when returning the proofs. If requested we will supply 25 free copies of the issue in which the paper is published. Reprints can be obtained but a charge will be made for these.

5. Particular care should be taken to avoid mistakes in lists of references and to lay them out in the following way, italics being indicated where appropriate by underlining.
DICK, G. & POTTER, J. 1960. Goshawk in East Stirling. *Scot. Birds* 1:329.
EGGELING, W. J. 1960. *The Isle of May.* Edinburgh and London.

6. English names should follow *The Handbook of British Birds* with the alterations detailed in *British Birds* in January 1953 (46:2-3) and January 1956 (49:5). Initial capitals are used for names of species (*e.g.* Blue Tit, Long-tailed Tit) but not for group names (*e.g.* diving ducks, tits). Scientific names should be used sparingly (see editorial *Scottish Birds* 2:1-3) and follow the 1952 B.O.U. *Check-List of the Birds of Great Britain and Ireland* with the changes recommended in 1956 by the Taxonomic Sub-Committee (*Ibis* 98:158-68), and the 1957 decisions of the International Commission on Zoological Nomenclature (*Ibis* 99:369). When used with the English names they should follow them, underlined to indicate italics, and with no surrounding brackets.

7. Dates should normally be in the form "1st January 1962", with no commas round the year. Old fashioned conventions should be avoided—*e.g.* use Arabic numerals rather than Roman, and avoid unnecessary full stops after abbreviations such as "Dr" and "St".

8. Tables must be designed to fit into the page, preferably not sideways, and be self-explanatory.

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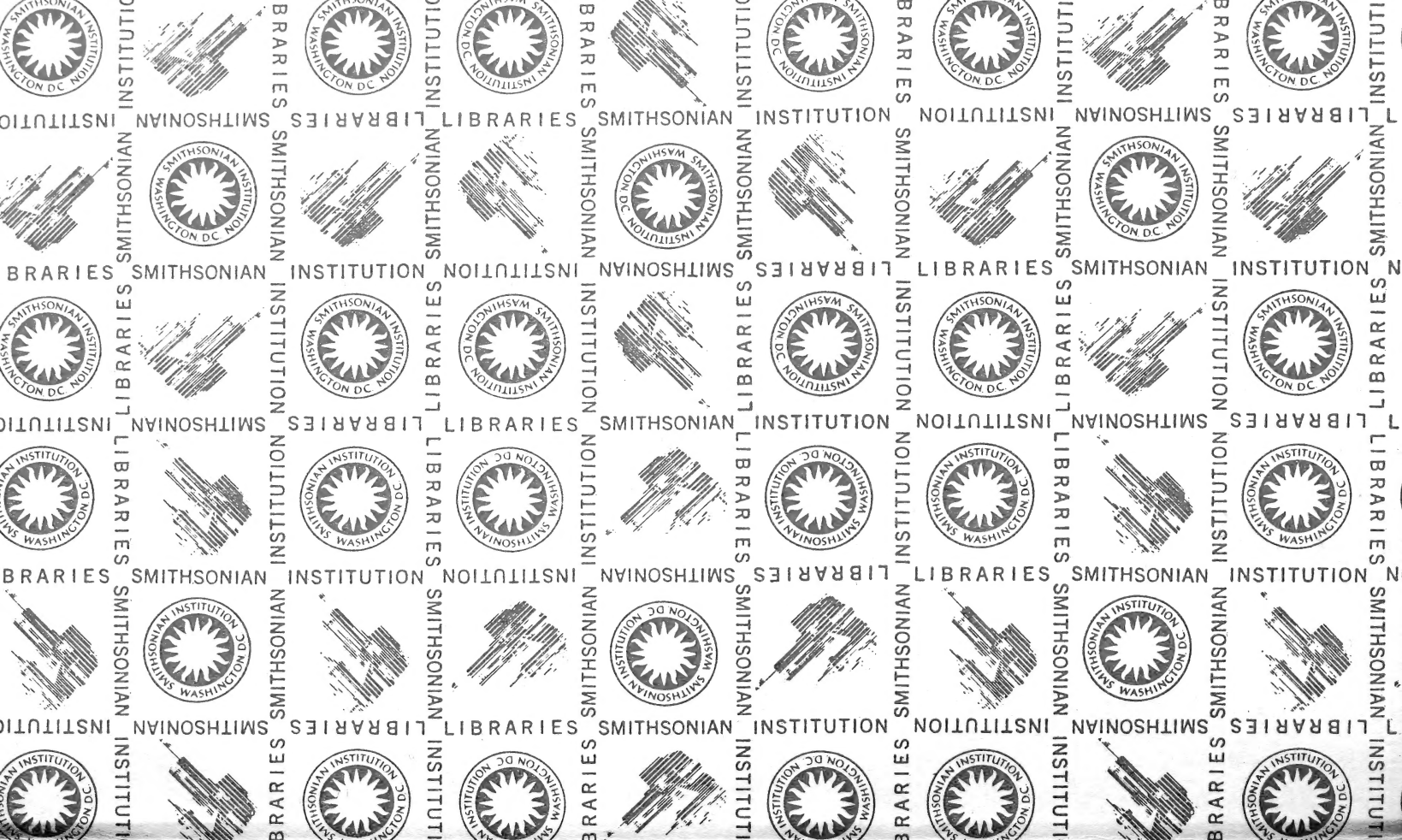
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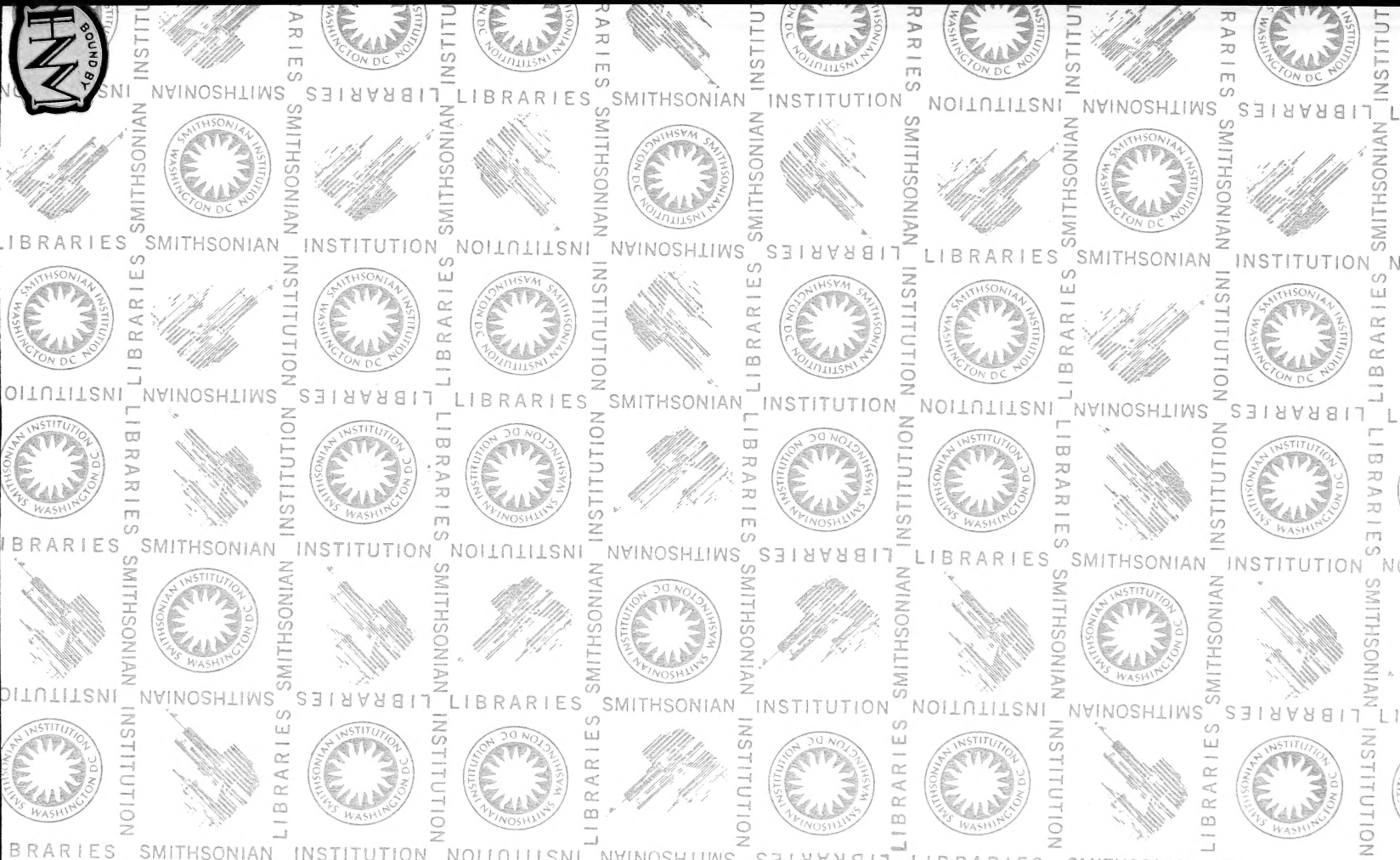
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